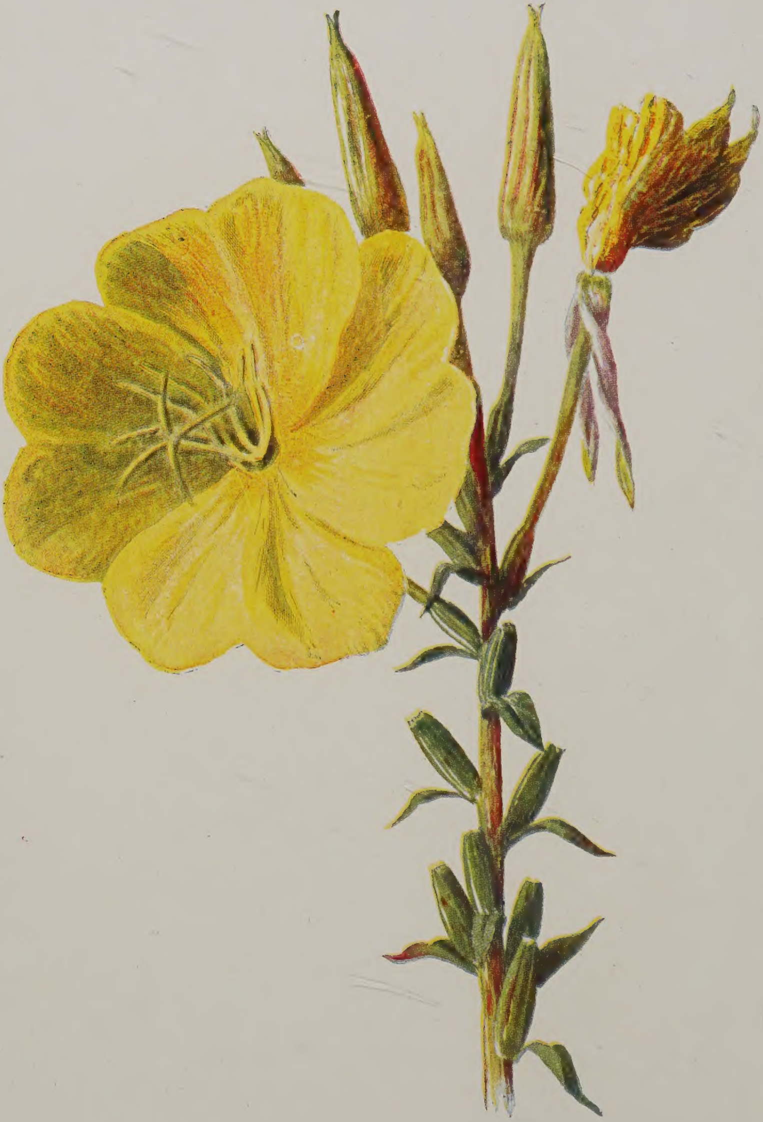
FAMILIAR WILD FLOWERS



EVENING PRIMROSE.

FAMILIAR

WILD FLOWERS

FIGURED AND DESCRIBED BY

F. EDWARD HULME, F.L.S., F.S.A.

"Lo, the lilies of the field,
  How their leaves instruction yield!
Hark to Nature's lesson given
  By the blessed birds of heaven!
Every bush and tufted tree
  Warbles sweet philosophy—
Mortal, flee from doubt and sorrow;
  God provideth for the morrow."

HEBER.

Seventh Series
WITH COLOURED PLATES

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LA BELLE SAUVAGE

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SUMMARY.

It should be prefaced that this Summary merely professes to give a brief epitome of each of the plants represented in this volume, and that it is principally a condensation from the writings of Hooker, Lindley, Bentham, or other authorities on the subject.*

EVENING PRIMROSE, *ŒNOTHERA BIENNIS. Nat. Ord., Onagraceæ.*—Calyx tube prolonged above ovary, four-lobed, segments reflexed. Corolla, four petals, large in size, yellow, fragrant, expanding in evening. Stamens eight. Style distinct. Stigma capitate. Inflorescence a long terminal spike. Fruit an oblong capsule, four-valved, seeds numerous. Leaves lanceolate, slightly toothed, veining prominent. Stem three feet high, slightly branching, and chiefly at base, erect, somewhat hairy.—Habitat: sandy banks and rubbish heaps. Flowering during July, August, and September. Duration, biennial. *p.* 1.

BUTTER-BUR, *PETASITES VULGARIS. Nat. Ord., Compositæ.*—Subdiæcious. Heads all tubular and male, or with a few female florets outside—or else the reverse, either all females, or with a few males. Pappus pilose. Receptacle without scales. Involucre imbricated; scales lanceolate. Leaves large, broad, radical, cordate, downy on lower surface. Flowering stems stout, clothed with narrow lanceolate scales. Flowers appearing before the leaves. Inflorescence a thyrsus: in male plant loose, in female compact. Rootstock perennial, freely creeping.—Wet meadows, borders of streams. Flowering from March to May. *p.* 5.

HARE'S-FOOT TREFOIL, *TRIFOLIUM ARVENSE. Nat. Ord., Leguminosæ.*—Calyx five-toothed, teeth longer than corolla. Corolla irregular, of papilionaceous type. Flowers minute, in cylindrical, soft, hairy, terminal heads. Stamens ten. Style simple. Ovary single, one-celled. Fruit, a pod. Leaves alternate, stipulate, of three narrow leaflets. Stem slender, branching, erect.—Cornfields, dry meadows, sandy embankments. Flowering during Summer and Autumn. Annual. *p.* 9.

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* See Prefatory Note to the Summary, Series I.

HOGWEED, *HERACLIUM SPHONDYLIUM. Nat. Ord., Umbelliferæ.* —Calyx adherent with ovary, five-toothed. Corolla of five unequal, obcordate petals with points inflected, varying in size, white. Stamens five, alternating with petals. Styles two. Inflorescence a compound, many-rayed, umbel. Involucre partial, many-leaved. Carpels two, combined, ribbed. Seed solitary. Leaves sheathing the stem, alternate, pinnate with large broad segments, rough, hairy, leaflets pinnatifid. Stems four to five feet high, hairy.—Hedgerows and borders of fields. Flowers during Summer and Autumn. *p.* 13.

BIRD'S-EYE PRIMROSE, *PRIMULA FARINOSA. Nat. Ord., Primulaceæ.*—Calyx five-toothed, tubular. Corolla salver-shaped, tube cylindrical, regular, segments deeply obcordate, lilac-purple. Stamens five, inserted in tube of corolla. Style one, stigma capitate. Inflorescence a terminal umbel. Capsule opening with ten teeth, single, one-celled, many-seeded. Leaves small, obovate, crenulate, mealy, radical. Stem erect, mealy, much longer than leaves.—Habitat: mountains, pastures. June and July. Perennial. *p.* 17.

DYER'S GREENWEED, *GENISTA TINCTORIA. Nat. Ord., Leguminosæ.*—Calyx with five teeth, two upper much the longer. Corolla of papilionaceous type, keel strongly reflexed after flowering, bright yellow. Stamens ten, united in sheath. Style simple. Ovary single, one-celled. Inflorescence racemose. Pod several-seeded, longer than calyx, flattened, glabrous. Leaves sessile, simple, lanceolate to ovate, glabrous, alternate. Stems woody, branching, decumbent, flowering stems ascending, stiff.—Habitat: fields and waste grounds. Flowering during early Summer. *p.* 21.

IVY, *HEDERA HELIX. Nat. Ord., Araliaceæ.*—Calyx small, five-toothed. Corolla small, pale green, petals five, oblong, acute, reflexed. Stamens five, alternate with petals, erect. Stigma simple. Inflorescence umbellate. Fruit smooth, globose, purplish-black, one-celled. Leaves lanceolate, entire, cordate, three or five-lobed, petiolate, coriaceous, shining, deep green, prominently veined. Stem flexible, climbing, extending to great length; wood soft, porous, light.—Habitat: trunks of trees, walls, rocks, banks. Duration perennial, an evergreen. Flowering during October and November; berries ripening in March or April. *p.* 25.

BLACK HOREHOUND, BALLOTA NIGRA. *Nat. Ord., Labiatæ.*—Calyx salver-shaped, five-toothed, equal. Corolla of labiate type, purple, rarely white, upper lip erect, concave, lower lip trifid, middle lip largest, ten-ribbed. Stamens didynamous. Style filiform. Stigma bifid, slender. Ovary four-parted. Inflorescence, whorls in axils of leaves. Fruit of four nutlets, within calyx. Leaves opposite, ovate, crenate, dull green, petiolate. Stems erect, branched, quadrangular, clothed with hairs, two to three feet high, whole plant strong-smelling.—Habitat: waste ground and hedge banks. Flowering during July and August. Duration perennial. *p.* 29.

GLADDON, IRIS FŒTIDISSIMA. *Nat., Ord., Iridaceæ.*—Flower a perianth; three outer segments large and spreading, the three inner much smaller, erect, purple, or, more rarely, pale yellow. Stamens three. Style one. Stigmas three, large, petaloid, arching over the stamens. Ovary inferior, three-celled. Fruit a three-celled capsule, seeds numerous, bright orange colour. Leaves equitant, sword-like; when bruised, malodorous. Stem erect, much covered by sheathing leaves. Flowering in early Summer.—Habitat: woods and pastures. Duration, perennial. *p.* 33.

HEMLOCK WATER-DROPWORT, ŒNANTHE CROCATA. *Nat. Ord., Umbelliferæ.*—Calyx small, permanent, five-toothed. Corolla of five petals, obcordate, points inflexed, white; outer flowers large, irregular, sterile; inner, small, regular, fertile. Stamens five, alternate with petals. Styles two, long, erect. Inflorescence a many-rayed compound umbel. Fruit linear, oblong, two carpels, crowned with styles, ribbed. Leaves large, tri- or quadri-pinnate, deeply serrate, smooth, deep green, stalked, alternate, with sheathing bases. Stem four or five feet high, erect, stout, grooved, hollow, freely branching. Root of several spindle-shaped tubers, exuding yellow, acrid juice. Flowering in July.—Habitat: margins of streams and ditches. Duration, perennial. Very poisonous. *p.* 37.

CREEPING YELLOW CRESS, NASTURTIUM SYLVESTRE. *Nat. Ord., Cruciferæ.*—Calyx of four sepals. Corolla of four petals, yellow, twice as long as calyx. Stamens six. Style single. Stigma capitate, nearly sessile. Ovary solitary, two-celled. Inflorescence a terminal raceme. Fruit a pod, two-celled, short, curved, several-seeded, cylindrical. Leaves deeply pinnatifid or pinnate, terminal lobe longest, alternate, exstipulate. Stem creeping at base, flowering stems ascending, about a foot in height. Flowering during June, July, and August.—Habitat: damp, low-lying ground, sides of streams. Duration, perennial. *p.* 41.

BUTTERWORT, *PINGUICULA VULGARIS. Nat. Ord., Lentibulariaceæ.*—Calyx two-lipped; upper lip thrice cleft, lower twice. Corolla spurred, ringent, drooping; rich purple upper lip two-lobed, lower lip three-lobed. Stamens two, from base of corolla. Stigma two-cleft, sessile. Fruit a capsule, two-valved, containing numerous minute seeds. Leaves radical, spreading, forming rosette on ground, ovate, succulent, covered with minute crystalline points, margins involute. Stems radical, three to six inches high, erect, bearing single flowers.—Habitat: bogs, moist heath, sides of streams. Flowering during May, June, and July. Duration, perennial. *p.* 45.

ELDER, *SAMBUCUS NIGRA. Nat. Ord., Caprifoliaceæ.*—Calyx small, five-cleft, superior. Corolla of five segments, cream-coloured, rotate, strong and unpleasant odour. Stamens five, antlers conspicuous. Stigmas obtuse, roundish. Ovary inferior, ovate, smooth. Fruit a succulent berry, purplish-black, one-celled. Inflorescence large terminal clusters, cymose, generally five principal stems and many secondary. Leaves in pairs, pinnate leaflets, deeply serrate, deep green, footstalks angular, channelled. Stems green, and filled with spongy pith.—Habitat: hedgerows, woods, waste lands. Flowering in June, and ripening berries in September. Duration, perennial. A small tree, up to twenty feet in height; wood even-grained, white. *p.* 49.

GLOBE FLOWER, *TROLLIUS EUROPÆUS. Nat. Ord., Ranunculaceæ.*—Calyx of very petaloid character, ten sepals or more in number, concave, yellow. Corolla of ten or more small narrow petals, nectiferous pore at base. Stamens numerous: anthers adnate. Styles numerous. Fruit of several one-seeded carpels. Leaves, radical leaves large, cut into five deep segments, stalked, serrate. Stem leaves few, smaller, quite, or nearly, sessile; stem erect, but little branching, glabrous.—Habitat: moist woods, mountain pastures. Flowering during June, July, and August. Duration, perennial. *p.* 53.

FRAGRANT ORCHIS, *GYMNADENIA CONOPSEA. Nat. Ord., Orchidaceæ.*—Corolla three-lobed, rosy-purple, fragrant, spurred. Stamens three, united with style in a central column. Stigma a viscid space in front of column. Ovary one-celled. Inflorescence a rather dense spike. Leaves alternate, linear-lanceolate, keeled. Fruit a three-valved capsule, seeds numerous. Stem up to two feet in height, leafy at base. Root has two tubers, one vigorous, one decaying.—Habitat: dry pastures, chalky banks, open moorland. Flowering during June, July, and August. Duration, perennial. *p.* 57.

MARSH PENNYWORT, *HYDROCOTYLE VULGARIS. Nat. Ord., Umbelliferæ.*—Calyx, teeth obsolete, adherent with ovary. Corolla very small, five petals, ovate. Stamens five in number. Styles two. Inflorescence, a simple umbel of about five flowers, on short stalks. Fruit, two flattened orbicular carpels, each containing a single seed. Leaves in dense masses, orbicular, peltate, slightly lobed, on long petioles. Stem long, slender, rooting at intervals.—Habitat: boggy land, soft soil by side of watercourses. Flowering from May to August. Duration, perennial. *p.* 61.

CHICKWEED, *STELLARIA MEDIA. Nat. Ord., Caryophyllaceæ.*—Calyx of five persistent sepals. Corolla small, white, of five very deeply cleft petals, shorter than calyx, twisting in the bud. Stamens rather inconstant in number, from five to ten. Styles three, linear, stigmatic throughout. Ovary one. Inflorescence, axillary stems, each bearing one flower. Fruit a six-valved capsule opening to middle, many-seeded. Leaves pointed oval, lower petiolate, upper sessile, smooth, in pairs, exstipulate. Stem weak, much branching, with one line of hairs. Root fibrous.—Habitat: amongst field crops, on waste ground, roadsides. Flowering almost the whole year round. Duration, annual. *p.* 65.

GUELDER ROSE, *VIBURNUM OPULUS. Nat. Ord., Caprifoliaceæ.* Small perfect flowers in centre of bunch; abortive flowers, larger, around these. Calyx tube adnate with ovary, five small teeth. Stamens five, inserted near base of corolla. Stigmas three, sessile. Inflorescence a terminal cyme. Leaves ordinarily three-lobed or five-lobed, coarsely toothed, in pairs, veining deeply marked. Fruit a crimson berry, one-seeded.—Habitat: hedgerows. Flowering by middle or end of June. Duration, a small tree seven to eight feet high. *p.* 69.

SEA SANDSPURRY, *SPERGULARIA MARINA. Nat. Ord., Caryophyllaceæ.*—Calyx of five flattish sepals. Corolla of five ovate, entire petals, pink to white. Stamens inserted into base of calyx. Styles three. Ovary superior. Inflorescence a forked cyme. Fruit a capsule, longer than calyx, seeds compressed, many-seeded. Leaves thick and fleshy, sessile, entire, opposite, semi-cylindrical, stipules ovate, membranaceous. Stem prostrate, branching from base, forming spreading tufts.—Habitat: salt marshes and sandy beaches. Flowering during June, July. Duration, biennial. *p.* 73.

HOUSELEEK, *SEMPERVIVUM TECTORUM. Nat. Ord., Crassulaceæ.*—Calyx ordinarily of about twelve deeply divided segments. Corolla ordinarily of about twelve petals, lanceolate, rosy purple. Stamens twice the number of the petals, half being without anthers. Style short, recurved. Stigma obtuse. Ovaries twelve in circle, pointed, compressed. Carpels one-celled, opening longitudinally, containing numerous minute seeds. Inflorescence a terminal cymose corymb. Leaves in dense rosettes, thick, succulent, evergreen, ovate, ciliated at margin, imbricated. Stem rising from rosette, a foot high, clothed with small leaves, erect, hairy. Root somewhat branched and fibrous.—Habitat: on cottage roofs, walls, and rocks. Flowering during June and July. Duration, perennial. *p.* 77.

DWARF CORNEL, *CORNUS SUECICA. Nat. Ord., Cornaceæ.*—Calyx four small teeth round summit of ovary. Corolla of four petals, very minute, purplish, surrounded by involucre of four large rounded petaloid bracts. Stamens four, alternating with the petals. Style simple. Ovary two-celled. Fruit a crimson berry-like drupe, edible. Inflorescence umbellate. Leaves in pairs, increasing in size from below upwards, stalkless, broadly ovate, entire. Stem herbaceous, simple, slightly branching, erect, about six inches high.—Habitat: mountain pastures. Flowering during June, July, and August. Duration, perennial creeping rootstock, throwing up annual stems. *p.* 81.

BISTORT, *POLYGONUM BISTORTA. Nat. Ord., Polygonaceæ.*—Perianth of five deep persistent segments, pink, bractea at base. Stamens eight, with purple anthers. Styles three, filiform. Stigma capitate. Ovary superior, triangular. Fruit triangular nut, with one seed, within persistent calyx. Inflorescence dense cylindrical raceme. Leaves alternate, ovate, entire, waved, the radicals large, on long footstalk, upper ones smaller, clasping, stipulate. Stem simple, erect, cylindrical, knotted at joints, one to two feet high. Root-stock woody, twisted, with numerous slender fibres, very astringent.

—Habitat: moist meadowland. Flowering from June to September. Duration, perennial. *p.* 85.

COW CHERVIL, *ANTHRISCUS SYLVESTRIS. Nat. Ord., Umbelliferæ.*—Calyx teeth obsolete, adherent with ovary. Corolla of five obcordate petals, white, unequal in size, small. Stamens five, alternate with petals. Styles two, arising from centre of disk. Ovary two-celled, one ovule in each cell. Fruit elongated, smooth, without ribbing, beaked. Inflorescence a compound umbel of eight to ten rays, general involucre is wanting, involucel present. Leaves alternate, tri-pinnate, leaflets ovate-lanceolate, deeply cut, lower leaves on long stalks. Stems boldly erect, branching freely, two to three feet high. Tap root.—Habitat: hedgerows, borders of woods, railway slopes, etc. Flowering during May and June. Duration, perennial. *p.* 89.

DWARF FURZE, *ULEX NANUS. Nat. Ord., Leguminosæ.*—Calyx nearly as long as corolla, hairless, twice cleft, the upper segment twice- and lower thrice-toothed. Bract at base minute. Corolla of papilionaceous type, standard bifid, yellow. Stamens monadelphous, ten. Style simple. Stigma one. Ovary one-celled. Fruit a two-valved pod, indehiscent, few-seeded. Inflorescence racemose. Leaves simple, alternate, stipulate. Stem woody, procumbent or erect, branching, very thorny.—Habitat: dry gravelly or sandy heaths. Flowering from July to November. Duration, perennial. *p.* 93.

WHITE MELILOT, *MELILOTUS VULGARIS. Nat. Ord., Leguminosæ.*—Calyx five-toothed, teeth nearly equal. Corolla of papilionaceous type, small, white, flowers very numerous, twice as long as calyx, deciduous. Stamens ten, diadelphous. Style one. Stigma one. Ovary one-celled. Inflorescence a long lax raceme, on axillary peduncle. Fruit a legume, ovate, mucronate, one-two-seeded, glabrous, straight, small, stout, indehiscent. Leaves alternate, of three narrow and toothed leaflets, the lower ones on the plant the broader, stipulate. Stem erect, freely branching, four feet high, wiry.—Habitat: fields and waste ground. Flowering during July, August, and September. Duration, perennial. *p.* 97.

TRIFID BUR-MARIGOLD, *BIDENS TRIPARTITA. Nat. Ord., Compositæ.*—Flower-heads drooping, discoid, florets uniform and tubular, surrounded by large leafy involucre. Pappus of two to five persistent awns. Stamens five. Style one, sheathed by anther-tube. Inflorescence a hemispherical flower-head. Receptacle with chaffy scales between florets. Ovary one. Fruit an achene, flattened, crowned with stiff bristles. Leaves in pairs, tripartite, leaflets lanceolate, deeply serrated. Stem stout, branching, one to two feet high, smooth.—Habitat: moist ground, banks of streams and ditches. Flowering during July, August, and September. Duration, annual. *p.* 101.

PLOUGHMAN'S SPIKENARD, *INULA CONYZA. Nat. Ord., Compositæ.*—Flower-head of numerous very small florets, rays very minute, within involucre, yellow. Disk florets tubular. Involucre ovoid, of thin, narrow, recurving scales or bracts. Inflorescence of numerous flower-heads at extremities of upper branches, forming a terminal corymb. Leaves alternate, ovate-lanceolate, lower ones stalked, upper stalkless. Achenes with many-haired pappus. Stem vigorously upward growth, tough, branching freely, two to three feet high.—Habitat: hedgerows, woods, roadside. Flowering from August to October. Duration, perennial. *p.* 105.

WATER PLANTAIN, *ALISMA PLANTAGO. Nat. Ord., Alismaceæ.*—Calyx of three ovate membranous spreading sepals. Corolla of three spreading petals, roundish, slightly notched at edge. Stamens six, with greenish anthers. Style filiform, erect. Stigma simple. Ovaries numerous, small. Fruit of twenty or more clustered ovate capsules, each one-seeded. Inflorescence a panicle, on summit of stalk, of spreading whorls, about six rays to whorl. Leaves radical, ovate, cordate at base, smooth, entire, waved edges, prominently ribbed, on long petioles, sheathing at base, nearly erect. Stem erect, obtusely triangular, smooth, naked, one to three feet high. Root somewhat bulbous, with numerous fibres at base.—Habitat: the margins of streams and ditches. Flowering during June, July, and August. Duration, perennial. *p.* 109.

WOOD SANICLE, *SANICULA EUROPŒA. Nat. Ord., Umbelliferæ.*—Calyx combined with ovary. Corolla minute, white; fertile and abortive flowers in cluster. Stamens five, alternating with petals. Ovary two-celled, with one ovule in each cell. Fruit ovate, densely covered with prickles. Inflorescence paniculate. Leaves almost entirely radical, on long stalks, deeply divided into obovate serrate lobes, generally five. Stem circular, scarcely branching till summit, smooth, one to two feet high. Root-stock short, woody.—Habitat: woods, copses, thickets. Flowering during June and July. Duration, perennial. *p.* 113.

GRASS OF PARNASSUS, *PARNASSIA PALUSTRIS. Nat. Ord., Droseraceæ.* Calyx of five segments, persistent, equal. Corolla white, crisp and papery in texture, five obovate spreading petals. Stamens five, perigynous, and alternating with these are five nectaries, spreading, glandular. Stigmas four, sessile. Ovary one. Fruit a one-celled, four-valved capsule, many-seeded. Inflorescence, flowers solitary, terminal. Leaves: the radical leaves heart-shaped, stalked, glabrous, entire, veining conspicuous, stem leaf stalkless, embracing stem. Stem wiry and angular, each stem bearing one leaf and one flower.—Habitat: bogs and wet ground. Flowering from August to October. Duration, perennial. *p.* 117.

FENNEL, *FŒNICULUM VULGARE. Nat. Ord., Umbelliferæ.*—Calyx adherent with ovary, teeth obsolete. Corolla of five yellow, regular, ovate petals, points inflexed. Stamens five, alternating with petals. Style short, thick, base very glutinous. Stigma obtuse, truncated. Fruit of two ovate compressed five-ridged carpels; seeds small, ovate. Inflorescence a terminal compound umbel, without involucre or involucel. Leaves alternate, biternate, leaflets pinnatifid, filiform, linear, petiolate, membraneous around axil. Stem erect, glaucous, cylindrical, furrowed, freely branching, about five feet high. Root thick, fusiform, and fibrous.—Habitat: on cliffs by the sea, especially chalk. Flowering during July and August. Duration, perennial. *p.* 121.

CHICKWEED WINTER-GREEN, *TRIENTALIS EUROPÆA. Nat. Ord., Primulaceæ.*—Calyx five to nine, partite. Corolla regular, inferior, white, rotate, petals not constant in number, from five to nine. Stamens in number as petals. Style one. Stigma capitate. Ovary one-celled. Fruit a capsule, opening to base with five to nine valves. Inflorescence, flowers borne singly on pedicels. Leaves mostly clustering near summit of stalks broadly lanceolate, acutely pointed, entire, waved, veining conspicuous. Stems erect, about six inches high; pedicels very slender. Roots thread-like and creeping.—Habitat: woods in the north. Flowering about June, Duration, perennial. *p.* 125.

YELLOW BEDSTRAW, *GALIUM VERUM. Nat. Ord., Rubiacæ.*—Calyx adherent with ovary. Corolla monopetalous, regular, of four segments, small, yellow, rotate, odorous. Stamens four, on long filaments, inserted on corolla. Style one. Ovary one. Fruit dry, globular. Inflorescence a dense panicle. Leaves in whorls of six or eight, dark green, glossy, linear.

deflexed, with revolute margins. Stems freely branching, slightly four-cornered, jointed, rough. Root-stock creeping, slender, woody.—Habitat: dry pastures, especially on light soils. Flowering from June to September. Duration, perennial. *p.* 129.

SEA PURSLANE, *ATRIPLEX PORTULACOIDES. Nat. Ord., Chenopodiaceæ.*—Flowers of two very distinct kinds, male flowers with regular five-cleft perianth and five stamens, and sessile female flowers with two flattened segments enclosing ovary, and united nearly to top. Style bipartite. Flowers small, numerous, in short, interrupted, axillary spikes, forming together terminal panicle. Leaves obovate, lanceolate, entire, silvery white. Stems shrubby, straggling, much branched, about eighteen inches high.—Habitat: sea coast, salt marshes. Flowering during August, September, October. Duration, perennial. *p.* 133.

WHITE GOOSEFOOT, *CHENOPODIUM ALBUM. Nat. Ord., Chenopodiaceæ.* — Perianth free, of five segments, persistent; all flowers similar and mostly perfect, green, very small. Ovary and fruit free from perianth. Stamens five, from base of perianth; anthers two-celled. Ovary one-celled, and single ovule. Flowers in short axillary spikes. Leaves alternate, ovate, sinuate-toothed, stalked, upper ones entire, very variable in width, covered with whitish mealy substance on both sides. Stem tough, pale green, often mealy.—Habitat: waste places, rubbish heaps. Flowering from July to September. Duration, annual. *p.* 137.

BLACK MEDICK, *MEDICAGO LUPULINA. Nat. Ord., Leguminosæ.* —Calyx with five nearly equal teeth. Corolla of papilionaceous type, small, yellow. Stamens diadelphous. Style one. Stigma one. Ovary one-celled. Fruit a two-valved, single-seeded pod, twisted, turning black on ripening. Inflorescence densely spicate. Leaves alternate, trifoliate, stipulate, leaflets obovate. Stems numerous and spreading, ordinarily procumbent, peduncles many-flowered.—Habitat: gardens and arable land. Flowering from May to September. Duration, annual. *p.* 141.

BUCKBEAN, *MENYANTHES TRIFOLIATA. Nat. Ord., Gentianaceæ.* —Calyx of five acute ovate segments. Corolla bell-shaped, of five ovate-lanceolate, acute segments, white, tipped pink, recurved, inner surface thickly covered with white filaments. Stamens five, anthers yellow. Stigma capitate. Ovary oval surmounted by simple style. Fruit a small capsule, one-celled, two-valved; seeds globose, smooth. Inflorescence a compound raceme borne on summit of stem, each flower with small bract at base of pedicel. Leaves all radical, of three leaflets, entire, margins undulating, on long petiole. Stems about one foot high, smooth, cylindrical. Root-stock of numerous fibres, creeping, spreading, matted.—Habitat: boggy and marsh land, shallow pools. Flowering during May, June, and July. Duration, perennial. *p.* 145.

MARSH CUDWEED, *GNAPHALIUM ULIGINOSUM. Nat. Ord., Compositæ.*—Flower heads discoid, heterogamous, pistillate florets in rows at circumference, small, two or three together, sessile, at extremities of branches; pappus pilose. Involucre imbricated; scales of involucre glabrous, yellow-brown, scarious. Receptacle flat, naked. Achenes minute. Leaves linear-lanceolate, downy, narrow, entire, wavy margins. Flower-heads surrounded by tuft of leaves. Stems much branching, diffuse, woolly, about six inches long.—Habitat: wet and sandy ground. Flowering July, August, September Duration, annual. *p.* 149.

WHITE CLOVER, *TRIFOLIUM REPENS. Nat. Ord., Leguminosæ.*—Calyx five-toothed. Corolla of papilionaceous type, white, reflexed on fading. Stamens diadelphous. Style simple. Ovary single, one-celled. Inflorescence a globular umbel. Leaves of three obovate leaflets, slightly hairy, pod short, containing two to four seeds. Stipules small, ovate, pointed. Stems creeping, rooting at nodes; flower stems erect, from an inch to a foot high, furrowed. Root fibrous, creeping, spreading.—Habitat: meadows, roadsides, etc., abundant. Flowering from May to October. Duration, perennial. *p.* 153.

STINGING NETTLE, *URTICA DIOICA. Nat. Ord., Urticaceæ.*—Flowers minute, very numerous, in long, branching, pendent clusters from axils of leaves, ordinarily diœcious, but sometimes monœcious. Male flowers a regular perianth of four ovate, obtuse, spreading segments, and four stamens. Female flowers a perianth of two obtuse obovate segments. Ovary superior, ovate. Stigma sessile, spreading. Fruit small, one-seeded. Leaves opposite, petiolate, ovate, cordate at base, deeply serrated, stipulate, with stinging bristly hairs. Stems erect, branching, quadrangular, three to four feet high, with stinging hairs. Root fibrous, creeping.—Habitat: waste ground, abundant. Flowering from June to September. Duration, perennial. *p.* 157.

FAMILIAR WILD FLOWERS.

THE EVENING PRIMROSE.

Œnothera biennis.
Nat. Ord., Onagraceæ.

MANY plants, originally strangers and pilgrims, have settled down very contentedly in our midst, and after they have undergone a period of probation, their claim to be naturalised has been recognised, and they duly take their place in our Flora. Many plants, and animals too, are introduced, some deliberately, some unknowingly and by chance, that fail to make good their footing; while others, finding the conditions genial, make themselves at home with us, our invited or uninvited guests. Thus a friend of ours who goes in very extensively for the cultivation of orchids rears unwittingly divers other tropical plants of which the spores or seeds have come over with the orchids; but the climate of a London suburb, outside his greenhouses, not being adapted to their well-being, they do not spread. In like manner it is common knowledge that proximity to the docks of London, Bristol, Southampton, and elsewhere, makes one acquainted with strange animal forms—centipedes, beetles, and even snakes—that are unknowingly brought over sea with timber and bales of goods, and are found strolling or wriggling along the quay until their career is summarily cut short under the boot-heel of some dock labourer, and any thoughts of acclimatisation they may have cherished are brought to a full stop.

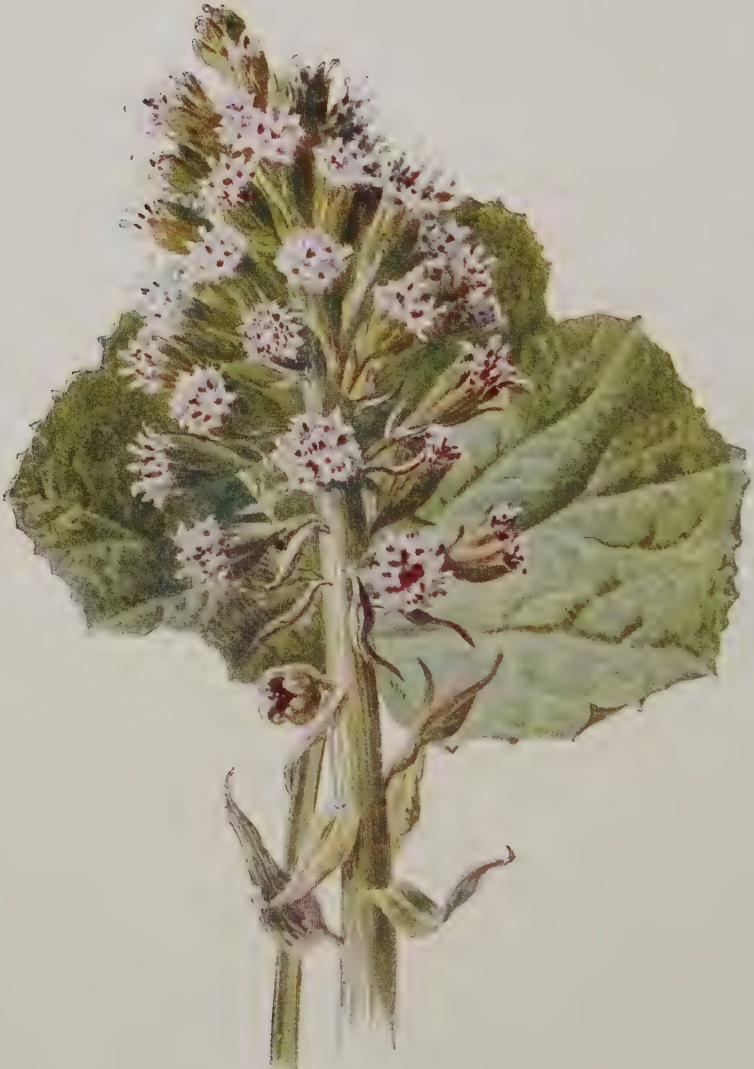
The evening primrose is one of these wanderers, as it belongs to a genus that is essentially American, and its true home is the United States. We have seen it growing in profusion on the sand-hills along the Somersetshire coast by Burnham, in such notable profusion that even the rustics, who ordinarily are entirely unobservant of such matters, have detected its presence, and it is curious that when we made some remark about it they told us that it came from the wreck there of an American ship.

The name *Œnothera* was applied to some plant by Theophrastus: whatever plant this was, we may fairly safely assume that it was not the evening primrose. The name was bestowed on the present plant by Linnæus. Theophrastus was born somewhere about three hundred and ninety years before the Christian era, and was a pupil of Plato and Aristotle, and amongst the two hundred treatises he wrote was one on the "History of Plants." *Œnothera* is a compound of two Greek words signifying wine, and searching or catching. The root when dried is said to have the scent of wine, to have caught the vinous odour, and we are also told that these roots were eaten as an incentive to wine-drinking. All this, however, is rather beside the mark, seeing that the evening primrose was hardly the plant found thus provocative. Moreover, when two or three explanations are given, it is ordinarily a proof of their insufficiency, one really good reason being much more satisfying. The specific name refers to the biennial nature of the plant.

We need scarcely say that the evening primrose is not so called from any botanical affinity with the sweet spring primrose of our hedgerow. Except in the colour of its blossoms it has no point of resemblance, and even the blossoms, though very suggestive in colour of the primrose, are of a somewhat stronger yellow, and lacking in that wonderful delicacy and refinement of tint of the better-known flower. It derives its prefix, evening, from the interesting fact that its noble flowers do not expand till nearly sunset. During the day-time we see the more or less withering flowers of yesterday, but in the evening, when the new blossoms expand, it becomes a much more striking plant. It is most interesting to watch the unfolding, and to find that the plant that half an hour before was in bud has now become a mass of flowers.

The evening primrose appears to favour river banks and sandy shores, and seems to be fully established in Lancashire, Suffolk, Warwickshire, and the Western counties. It may also be found on rubbish heaps. As the plant was at one time considerably cultivated for its edible roots, it became in some cases an escape, and, since it seeds most profusely, would soon find a home for itself. The roots when boiled are said to be very nutritious, but the potato and parsnip, and other roots, have now supplanted it.

The plant grows to a height of some three or four feet, and its large, yellow, fragrant flowers form a terminal spike. The leaves are spear-shaped, slightly toothed, and from an inch or two to a foot in length. The falling-back of the calyx segments, as seen in our illustration, is a noticeable feature. The flowering period is July, August, and September.



BUTTER-BUR.

THE BUTTER-BUR.

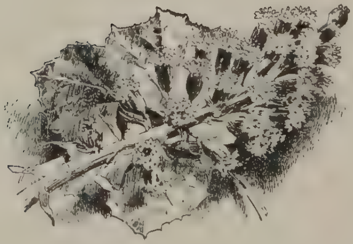
Petasites vulgaris.
Nat. Ord., Compositæ.

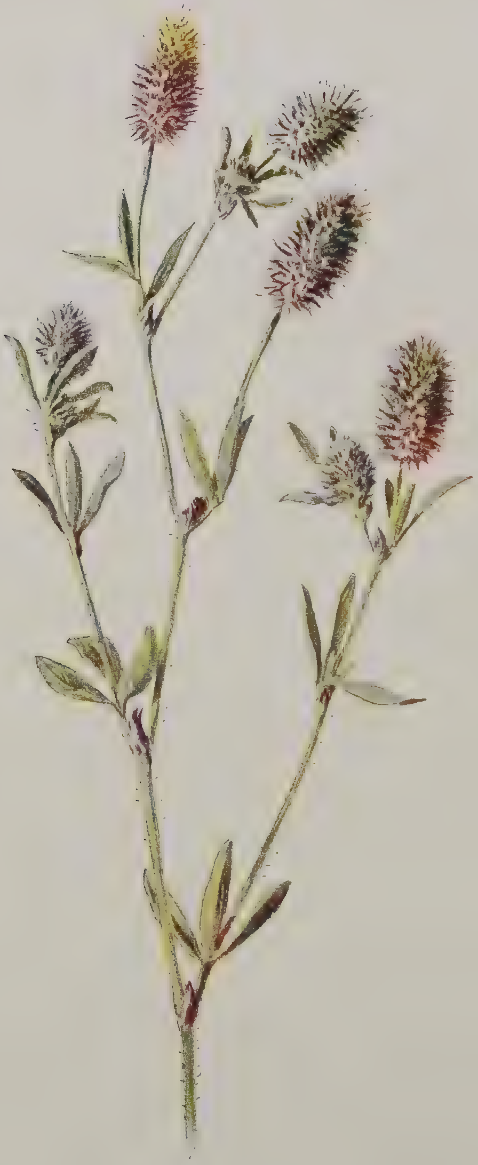
THE butter-bur is a near relation of the coltsfoot, a plant figured in another volume, and, like it, is one of the early flowers of the year. While Hooker and other authorities class it in the genus *Petasites,* a genus of which it is the only British representative, other writers place it in the same genus as the coltsfoot, *Tussilago Farfara,* and call it *Tussilago Petasites.*

If our readers now, letting wild flowers severely alone, will journey with us far from flowery meadow or breezy common into the heart of busy London, and accompany us to the British Museum, we shall presently find ourselves in delighted contemplation of the glorious frieze from the Parthenon. There in stately procession are found, *inter alia,* many noble equestrian figures, and some of these are wearing the petasos, a broad, flat head-covering; and when we return to country scenes and see the great leaves of the butter-bur, we begin to realise why the older writers called the plant the *petasites*, while the profusion in which they are found quite accounts to us for its specific title *vulgaris*. Why the plant should be called butter-bur does not at all clearly appear. A bur is, like the flower-heads of the thence-called burdock, a clinging mass that adheres to the dress; but there is nothing particularly suggestive of this in the present plant. The first half of the word, we are told by some writers, originated from the large leaves being used to wrap up butter in. If this use of the leaves ever arose and became a custom, we should have to rest fairly content with the explanation; but there appears to be no proof forthcoming of this utilisation of them.

The flower-heads of the butter-bur are monœcious, having the male and female flowers distinct. They are a pale-pinkish purple in colour, and are borne in a cluster on the head of the flowering stem. This flower-bearing stem is from about three inches high to a foot or so, and throughout its lower portion is more or less thickly clothed with scales. These scales increase in size as we approach the root, the lower ones being two or three inches in length. The illustration shows these scales very clearly.

If in our visit to the British Museum we find any sculpture of a Bacchanal subject we shall probably see that some of the figures are carrying long rods with a sort of cone-like termination. This was the thyrsus, and the term is employed botanically to such a flower stem as that of the butter-bur, where the mass of inflorescence is in a somewhat compact cluster at its extremity. In the coltsfoot it will be seen that the plant throws up many flower stems, each being terminated by one flower-head, while its brother or cousin—according as we are willing to admit more or less nearness of relationship in the two plants—the butter-bur, throws up one or two flower stems only, but these bear many flower-heads. Anyone comparing our figures of the two plants will see this difference distinctly. The flowers of the butter-bur appear in March or April, before the leaves are much in evidence. Later on the flowers have withered away, and the leaves, almost round in their general outline, have grown until some of them are as much as forty or fifty inches in circumference. The plant is found chiefly in low-lying meadows and by the side of streams, the essential condition being plenty of moisture. The root creeps very freely, and thus the plants are multiplied to an extent that the farmer whose meadow is taken possession of by no means appreciates, though the artist revels in them in all their bold decision of form as a charming foreground accessory, if the subject of his picture at all permits. In a previous home of ours we transferred some of the roots to our garden, and the plants grew magnificently; but in our present home at Kew, a London surburb which many people we find regard as permanently water-logged, we have quite failed, though we have more than once brought home a goodly store of the roots from the river bank. The leaves unfortunately seem to be a rather popular item in the dietary of divers small caterpillars and the like, and so get ragged at their edges, and have their broad surfaces eaten into a state of considerable disfigurement. The under surface of the leaf is considerably paler looking than the upper, almost greyishwhite, and as the great leaves move freely if any wind be stirring, the effect of the change from a good strong green to this paler tint is rather striking. In Germany an old name for the plant was *Pestilenzwurt*, but one finds really very little either of evil or of good assigned by the older writers to the butter-bur as compared with most other herbs. The old German name was bestowed on the plant, not as suggesting that the plant was provocative of pestilence, but as an indication of its value as a remedy in time of such calamity.





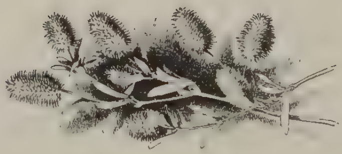
HARE'S-FOOT TREFOIL.

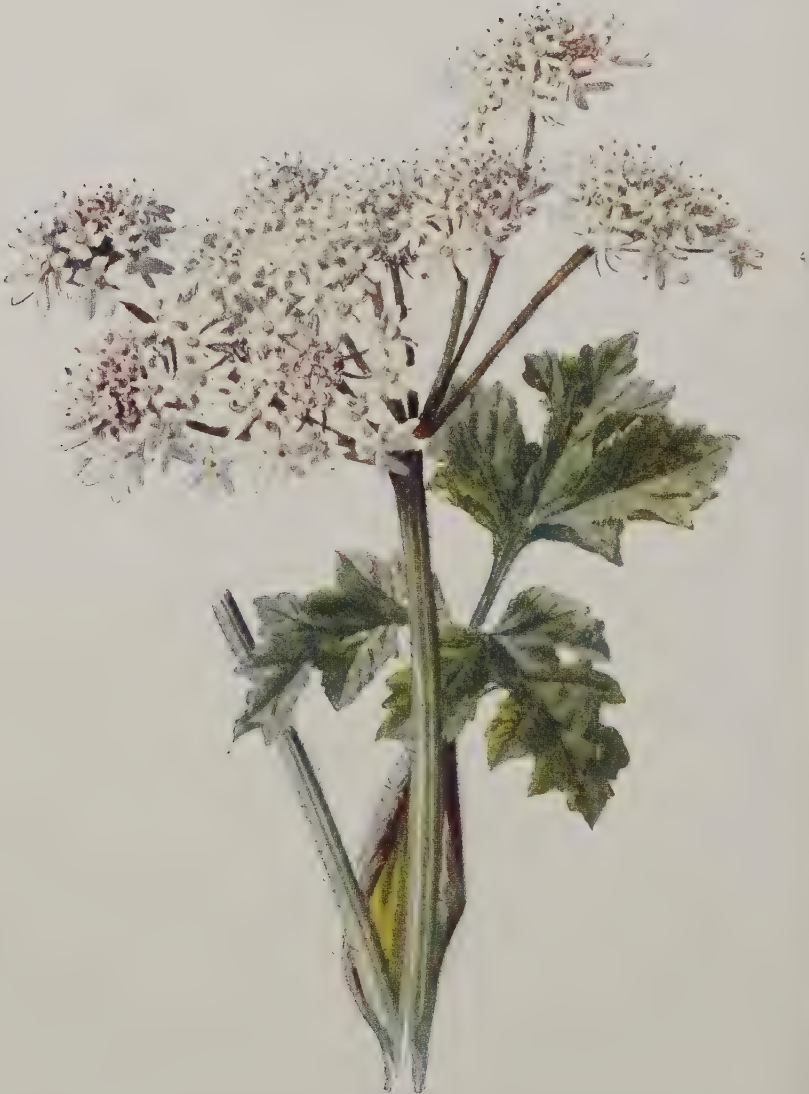
THE
HARE'S-FOOT TREFOIL.

Trifolium arvense.
Nat. Ord., Leguminosæ.

WHILE the graceful little plant figured in our illustration is very commonly distributed, its small size and inconspicuous colouring render it considerably less in evidence than many others of our wild plants. The brilliant scarlet poppies setting the railway embankments gorgeously aflame with their splendid colour and abundance, the glowing yellow corn-marigolds that in profusion are found in the ripening wheat or oats; their graceful neighbours the rich blue corn bluebottles; the silver shields of the ox-eye daisies, each with its disc of gold; the tall purple foxgloves—these need but little search, and are favourites with everyone; but besides them, and such as them, are many plants not less charming if we will but take a little trouble to cultivate their acquaintance. A friend of ours, speaking of another person, said, "Well, he takes some knowing, but he is well worth it." Some attract us greatly even on first introduction, while others not so immediately attractive gain our esteem by a slower process, but

Several English plants have association in their nomenclature with the hare. We find, for instance, the hare's-tail grass, the *Lagurus ovatus*, the generic name being derived from two Greek words meaning hair and tail, and applied to the plant from its soft heads. We have, again, the hare's-ear, once called the *Auricula leporis*, from the shape of its leaves. "Hare's-lettuce," another name for the sowthistle, does not arise from any fancied similarity between animal and plant, but from an old belief that "yf a hare eate of this herbe in somer, when he is mad, he shal be hole." To the hare's-foot trefoil but few medical virtues appeared to have been assigned.





HOGWEED.

THE HOGWEED.

Heracleum Sphondylium.
Nat. Ord., Umbelliferæ.

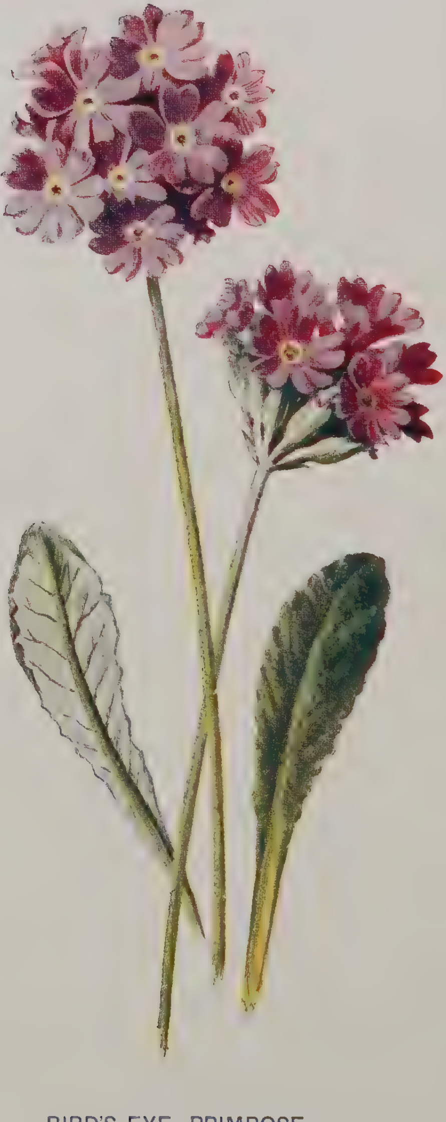
AMONGST our many different kinds of umbel-bearing plants the hogweed, the subject of our present figure, will no doubt be one of the best known to our readers, alike from the large size of its flowers and from the commonness of its occurrence. As we can imagine someone looking at our illustration and saying, "Well, really, I should not call those very large flowers," we hasten to add the qualifying remark—large for an umbelliferous plant. Most of our umbel-bearing plants, though they may range from six inches to six feet in height, agree at least in this—the inconspicuous size of their individual flowers. The fool's parsley, carrot, and others that we have figured in our volumes will illustrate this. The aggregate mass of blossoms in the flower-head, and especially when these blossoms are white, as they ordinarily are, may be very fairly conspicuous in the mass of vegetation from which they spring, and, indeed, often is. The blossoms of the hogweed illustrate very well, again, another characteristic of most of the umbelliferous plants, the marked difference in size of the blossoms according to their position, the inner ones in each little group being very much smaller than those on its outer border.

The hogweed often attains to a height of four or even five feet, and abounds on most weedy hedge banks, and amongst the rank undergrowth round the borders of fields, in copses, and such-like positions. It flowers during July and August, is one of the commonest of our British umbellate plants, and a perennial. The leaves of the hogweed are of pinnate character, the lateral segments being of a very varying number of pairs. These segments are broad and very deeply toothed and lobed. The lower leaves on the plant are very large, and both foliage and stems are covered with short and stiff hairs. We occasionally find the leaves made up of a more numerous series of leaflets than in the normal condition, these leaflets being also considerably narrower than in the type form. This modification has been by some botanists held to be of sufficient importance to justify the creation of a new species, the *Heracleum angustifolium*, but this is not generally accepted. The umbels of the hogweed are large, often much larger than the limits of our page will allow us to portray, and frequently having eighteen or twenty rays, those of our figure being apparently about ten in number. The inflated sheathing at the base of the leaf, at its junction with the stem, is very clearly indicated in our drawing, and must be made note of, as it is a very characteristic feature of the plant's growth. The petals are five in number, nearly, or quite, similar to each other in the small central flowers, but of very varying length in the large outer flowers. In these latter they are boldly radiant, obcordate, reversed heart-shape in form, two small, two large, and the fifth larger yet, the flower being so placed that in all cases this largest petal is the farthest from the centre of the cluster it helps to fringe.

The plant derives its specific name, *Heracleum*, from Hercules, as he is said to have brought the virtues of this, or some allied plant, to the knowledge of mankind. Some of the East European and Asiatic species of the genus may occasionally be found in cultivation in our parks and gardens. They are very striking plants, throwing up a stem fourteen or fifteen feet high, and their umbels and foliage on the same liberal scale. In gratitude to Hercules for his interest in suffering humanity the plant was held sacred to him, but what particular species was intended we have no clue to, as any attempt to unravel the confusion of plants in the writings of Pliny and other early writers is hopeless. The specific name, *Sphondylium*, spelt, it will be noticed, with a capital S, is a Greek word for an insect of rank, unpleasant odour; and the hogweed being also of somewhat rank, unpleasant odour, one of the old names for the plant was derived from that of this insect of ill repute. Specific names are ordinarily adjectival in character, such as *aureus*, golden; *cineria*, ash-coloured; *viscarius*, sticky; *sterilis*, barren; *asper*, rough; *inodora*, scentless; but at times they are substantives, as *Cypripedium Calceolus*, the latter word being a slipper; *Clematis Vitalba; Fritillaria Meleagris;*

Taraxacum Dens-Leonis; these three specific words signifying respectively a white vine, a guinea fowl, a lion's tooth. Such substantival specific names are always given a capital letter

In old herbals the hogweed is sometimes the clog-weed, or in very old ones *keyc-logge*, meaning the hollow-stemmed plant; the mediæval "clog" being a contraction and corruption of the earlier Anglo-Saxon form. It is also sometimes called the cow-parsnip, or meadow-parsnip, and in earlier days madnep. In those same earlier days the parsnip was the pasnep, and the mad in madnep is the same word really as mead or meadow; so we come round again to the idea of meadow parsnip. It has been affirmed that hog-weed and cow-parsnip are names suggested by the fondness of these and other animals for the plant. In some districts the leaves are collected and given to the pigs, and they appear to thrive on them. As the plant belongs to the same order as the hemlock, fool's parsley, and other virulently poisonous plants, it is held under great suspicion, but this appears to be quite undeserved.



BIRD'S-EYE PRIMROSE.

THE
BIRD'S-EYE PRIMROSE.

Primula farinosa. Nat. Ord., Primulaceæ.

WHILE it is proverbially true that "tastes differ," we shall, we think, find little difficulty in gathering together a goodly body of admirers of the delicacy and beauty of the present plant, the bird's-eye primrose. While as true a primrose botanically as the beautiful sulphur-yellow flower that rises to one's thoughts at the name of primrose, its charms of growth and colour are entirely different and scarcely less potent. The little individual flowers, if we isolate them from the cluster in which they nestle, are very similar in shape and detail to those of the better known primrose, and we begin to realise that its claim to brotherhood calls for full recognition. If not enwrapped in those sentimental charms and tender associations that, apart from their inherent beauty, endear the sweet primroses of the spring time to us, the bird's-eye can, in its delicacy of form and colour, appeal to us scarcely less strongly.

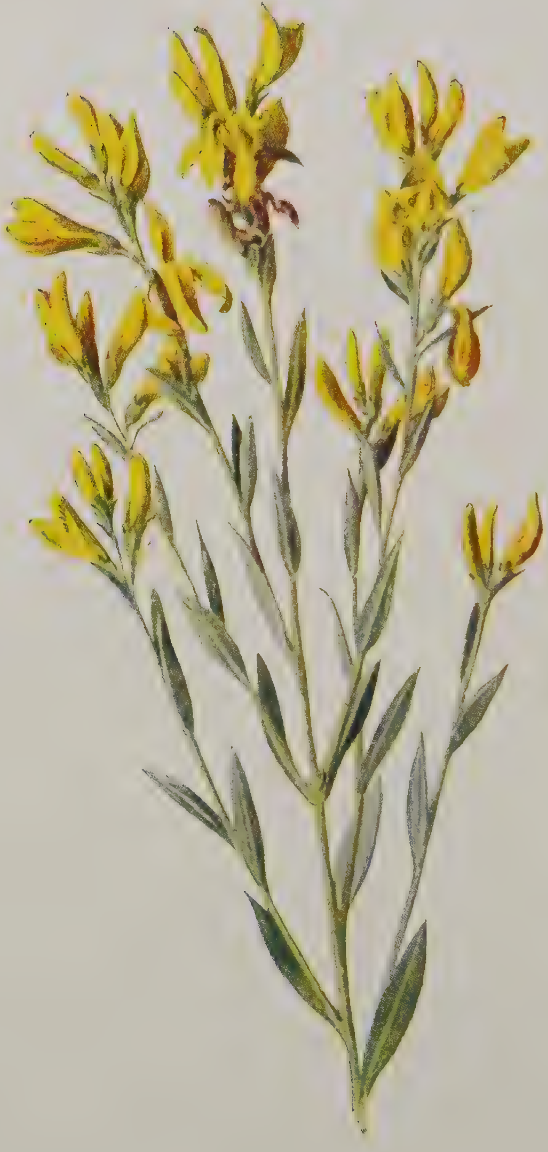
The bird's-eye primrose has a perennial rootstock. The leaves are small, and broadest not far from the apex, of the form therefore known as obovate; hairless on their upper surfaces, and covered beneath with a white, mealy down. This has a musky smell, and is found not only on the under-surfaces of the foliage, but also on the stalk—and especially at its upper extremity—and on the calyces, giving these latter a grey and dusted appearance. The veining of the leaves, as in the common primrose and the cowslip, two allied plants, is very conspicuous, so that the upper surface of the leaf is very uneven, and the margins are crenulated. These margins often roll under a little, a peculiarity that may be very well seen in our left-hand leaf, the one showing the grey under-surface. The flower-bearing stem stands boldly up from the midst of the cluster of leaves at its base, and is much longer than they are. It is cylindrical, and bears throughout its length no leaves upon it. At its extremity we find a compact umbel of flowers, ordinarily from about ten to twenty in number. These flowers are very fully expanded; the fine segments of the corolla are heart-shaped, and stand boldly away from each other. They are ordinarily of a beautifully delicate lilac-purple colour, though sometimes quite, or nearly, white, and have, in either case, a clear yellow central eye. The fruit, a capsule, that succeeds them, opens at the top for the discharge of its seeds. The calyx is tubular, terminating in five teeth.

The bird's-eye primrose is a plant of the mountain slopes and pastures, and may be met with on the great mountain ranges of Europe and Asia, and extending well into the Arctic regions. It is by no means uncommon on the high grounds of the northern counties of England, though, curiously enough, it is much less common in Scotland, a yet more northern land ; and we have no record of its having been discovered in Ireland. That, however, is by no means conclusive, and it may yet be found there when the right man finds himself in the right place at the right time, all three conditions being essential.

Gerard, in his "Herball, or General Historie of Plantes"—our copy is dated 1633—says that "these plants grow very plentifully in moist and squally grounds in the North parts of England, as in Harwood, neere to Blackburne in Lancashire, and ten miles from Preston in Aundernesse; also at Crosby, Ravenswaith, and Crag-Close in Westmorland. They likewise grow in the meadowes belonging to a village in Lancashire neere Maudsley called Harwood, and at Hesketh, not far from thence, and in many other places of Lancashire, but not on this side Trent" (Gerard writes as a Londoner) "that I could ever have any certain knowledge of. Lobel reporteth, That Doctor Penny, a famous Physition of our London Colledge, did find them in these Southerne parts." It is interesting to put down these old localities, and will be the more so if anyone living or travelling in those parts encounters again these plants of which Gerard knew the distant ancestors. It is curious to read, on the other hand, such a book as the "Flora Londinensis" of Curtis and find him botanising in fields, streams, and woods that have long since been absorbed by the metropolis in its ever-advancing march, localities where to-day a patch of bugloss or a root of ground-ivy one would be as little likely to find as a fiery dragon or a cat-a-mountain rampant. The pleasant valley of the Fleet has hopelessly lost its rural character, and the arrowheads and flowering rushes find no home in the foul subterranean channel that runs beneath the roaring turmoil of a great city street.

Specimens of the bird's-eye primrose growing in the North of Scotland, in Caithness and the Orkney Islands, and in other localities bordering on the sea, vary from the typical form of the plant in being of stouter habit and much smaller, in having leaves of broader proportions and flowers of a deeper purple; and some botanists are inclined to distinguish this variety by creating it an independent species, and calling it the Scotch bird's-eye, *P. Scotica,* while others are content to consider it but a variety from the type, and label it *P. farinosa, var. Scotica.* Sir William Hooker, erstwhile director of the Royal Botanical Gardens of Kew, and a botanist of recognised eminence, we see, goes in for splitting off this *Scotica* and giving it specific rank, though he does so evidently with some little hesitation.

The bird's-eye primrose, we may add, is so called from the bright yellow centre to the flower, suggesting the idea of the iris of a bird's eye.



DYER'S GREENWEED.

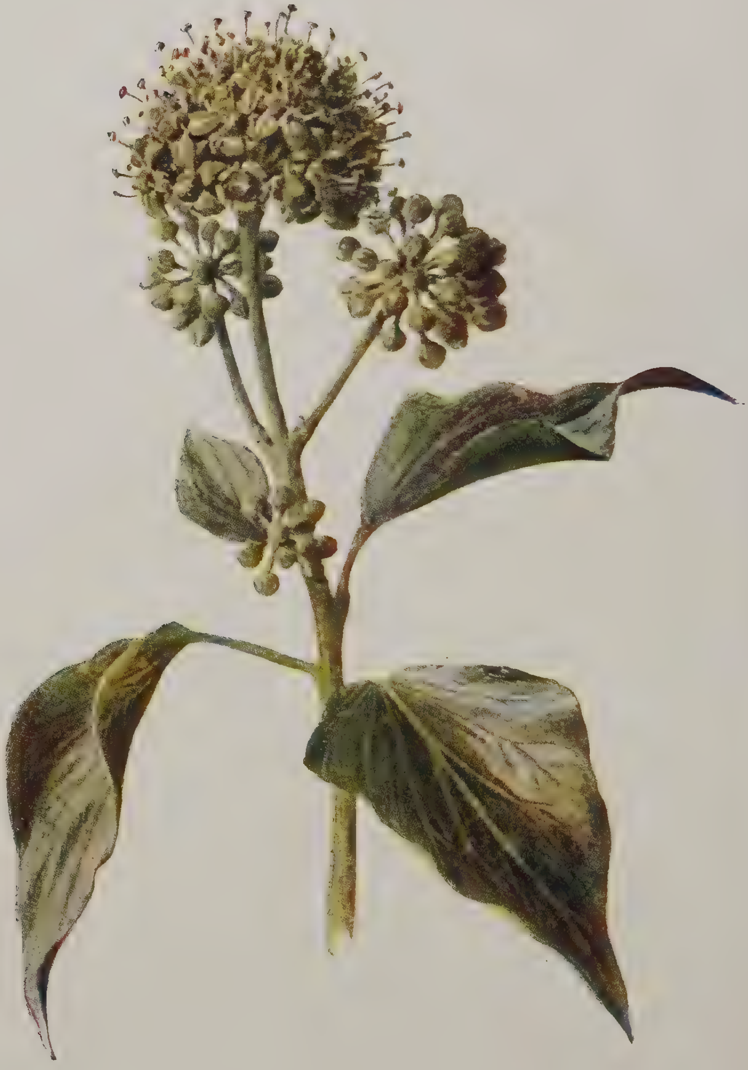
THE DYER'S GREENWEED.

Genista tinctoria. Nat. Ord., Leguminosæ.

SCATTERED fairly commonly, found over the greater part of England, though more rarely to be encountered in either Ireland or Scotland, is the subject of our present illustration, the dyer's greenweed. Some of our native plants are boreal, and scarcely penetrate sufficiently south to be known throughout England: the two-flowered Linnæa, for example, though found fairly freely in the Scottish fir woods, is unknown in England except in the extreme northern counties; and anyone referring to our description, in the present volume, of the chickweed winter-green, will find that it supplies a very similar illustration. The dyer's greenweed, the plant now specially engaging our attention, is the reverse of this, being one of the southern plants common enough in Central and Southern Europe, and fairly frequent over much of England, that grow distinctly rarer in Scotland. On the Continent, its northern limit is the southern extremity of the great Scandinavian peninsula that stretches away ever northward till it becomes the Land of the Midnight Sun, a state of things that *Genista tinctoria* entirely declines to have anything to do with.

The dyer's greenweed should be sought for on waste ground, pasture lands, or the edges of fields, amongst the numerous species that there find an undisturbed and congenial home, and will ordinarily be found in flower about July. The root is perennial, and from this spring the woody stems, branching, and rising in a more or less erect direction, ordinarily to a height of a foot to a foot and a half, though occasionally we find them prostrate. This latter condition is, however, not at all usual. Though we have called the stems woody, as descriptive of their hard and wiry nature, they are green in colour. The leaves are stalkless, thrown off directly from the main and subordinate stems, not varying much in size or form whatever their position on the plant. The typical leaf form is lanceolate, though the proportion of width to length may at times be so increased as to make the foliage broadly elliptical; much depending upon whether the habitat be one of rich luxury or of rocky, barren hardness. The surface of the leaf is somewhat shiny, and nearly or quite smooth and free from hairs. A closely allied plant, the petty-whin, *Genista anglica,* has its stems thickly studded with short and sharp spines, but the present plant is entirely thornless. The flowers are arranged in short racemes at the ends of the stems, and are of the pea-form type. At the base of the short stalks that bear them will be found a lanceolate bract. The calyx is two-lipped, the upper one being cut into two deep segments, and the lower into three. The standard of the corolla is erect, and remains so, but the keel, the lower portion of the flower, drops after flowering, a feature that may be very well seen in our illustration. On the dying away of the flowers they are succeeded by a flattened and narrow pod about an inch in length. These pods are hairless, a matter one would say of no great importance, but yet one of the specific differences between this species and the allied *G. pilosa*, or hairy *genista.* In this latter the pod is shorter and broader than that of the dyer's greenweed, and thickly clothed with silky hairs.

Our popular English name, dyer's greenweed, like the Frenchman's name for the plant, *Genêt des Teinturiers,* is a testimony to the economic use of the plant. All parts of the herb yield a good yellow dye, and have long been used for this purpose in rustic manufacture of textile fabrics. In association with woad it gives a good green. Nowadays various dyeing products are brought from foreign countries, and these have gradually supplanted our home-grown madders, greenweeds, and the like; but in earlier days the tartan of the Highlander, the shawl and dress of the cottager, drew for their colouring on the supplies that Nature yielded them on their native mountains, on their moorland wastes, or by their village pastures. The specific name *tinctoria* refers to the use of the plant that bears it as a dyeing material; the woad, for example, is the *Isatis tinctoria,* and this greenweed that is now engaging our attention is the *Genista tinctoria.* In the same way the madder is the *Rubia tinctoria.* As the native plants have been supplanted by the foreigners, such as the logwood, indigo, quercitron, and many others, so these, in turn, in the ever onward march of chemical investigation, are bound to be supplanted by quite other dyeing materials. Tar, once an utterly waste product, now yields an immense variety of colouring matters, thanks to the discoveries of Perkins, Hoffmann, and other investigators in this fertile field of research. It is computed that England, from the two hundred million tons of coal used up in the manufacture of gas, also produces as a bye-product six million tons of tar. This quantity will give an annual output of over five hundred tons of aniline, having a commercial value of over one million sovereigns. At Ludwigshafen, on the Rhine, we have seen a great manufactory busily supplanting all the labours of our indigo-planters in India and Java, producing from naphthaline, a constituent of coal-tar, an indigo that is said to be chemically identical with that derived from the plant, and at a much cheaper price. When we realise these facts and figures, we realise, too, that the days when the country folk found in woad, weld, and greenweed a sufficiency for their modest needs are gone for ever. One cannot but regret the inevitable disappearance of so many of our old cottage industries.



IVY.

THE IVY.

Hedera Helix. Nat. Ord., Araliaceæ.

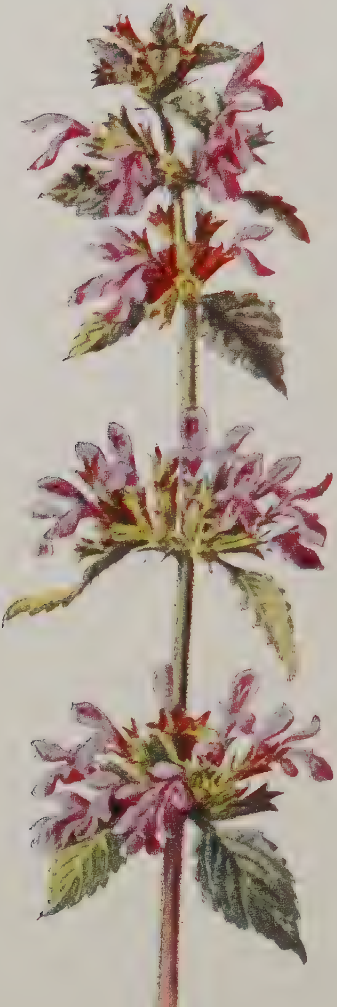
THE thought may possibly have occurred to some of our readers that, as one volume succeeds another in our series, our store of really familiar wild flowers must be growing nearly exhausted; but one glance, we think, at our illustration will suffice to convince them that here, at least, we are on familiar ground indeed. Were it necessary to justify the present volume, we should find ample vindication in the presence of the chickweed, the elder, the cow chervil, the stinging nettle, all of them found everywhere in abundance, and the hogweed, the horehound, the yellow bedstraw, the white clover, no less common in every district throughout the country.

The ivy may be found creeping over the ground, clothing the trees with its dense mass of foliage in our woods and copses, or spreading its covering of glossy leaves over our walls and buildings. It adheres to the rough bark or the brick or stonework by means of rootlets thrown out from the stems, and it is a question often asked whether its presence is harmless or hurtful. In the case of the trees it would appear to be on the whole injurious, and chiefly because it clings so closely that it compresses the bark, and prevents the due development of the trunk and branches of the tree; while in the case of buildings its thick covering has a tendency, one would imagine, to make the walls damp, though others tell us that it keeps them dry! Even when we find its great masses of foliage taking possession of some old ruin we encounter a great difference of opinion, since some will tell us that its spreading roots and branches penetrate between the stones, and gradually, but surely, carry on a work of disintegration, while others have it that the effect is to bind all together and preserve the walls from crumbling away. If the building be of any architectural interest, the presence of the ivy is an undoubted drawback, as it soon throws a thick covering over everything, and Norman moulding, or Decorated tracery, or Perpendicular panelling is treated with scant respect, and quickly hidden from sight. In its climbing days the foliage is ordinarily more or less acutely fine-lobed, but when it reaches the end of its tether and can climb no more up trunk or tower, it grows out into great bushy masses, and its foliage becomes of the ovate character we see in our illustration, and it is under these latter conditions that we find the clusters of flowers and berries. The ivy flowers very late in the year, being rarely in blossom before October or November.

When the ivy has been allowed to grow unmolested for many years, the trunk may be a foot or more in diameter, and the tortuous, flexible branches stretch away in every direction to a great length. The wood is soft and porous. The leaves vary considerably, as we have seen, in form, are thick and leathery in texture, evergreen, of glossy surface, and the veining prominently marked. The flowers are clustered together in spherical umbels. They are of small size, and of a somewhat dull pale green in colour. The petals are five in number, and reflexed. The calyx-segments and stamens are also in fives. The fruit is a smooth purplish black berry, ripening in the early spring, and affording a very grateful food to the birds when the winter is severe, the ground possibly covered with snow, and provision of any kind is exceptionally welcome. These berries seem somewhat hard, tasteless, and generally uninviting, but when fully ripe they become rather more succulent. Hunger renders them acceptable, and wood-pigeons, blackbirds, thrushes, and many other kinds of birds are well content to dine off them. The late-flowering blossoms are welcome to the bees. The ivy is freely found throughout Europe, Western Asia, and Northern Africa, but is not met with in the New World, nor in Australia.

Why the plant should be called *Hedera* is open to question. One authority tells us that it is from *hæreo*, to adhere, and that certainly sounds very feasible; another finds its birth in *edo*, to eat; while a third, seeking in quite another direction, tells us that what we are really seeking is found in the Celtic word *hedra*, a cord. The specific name *Helix* signifies wound about, and was bestowed on the plant as a substantive name by Pliny.

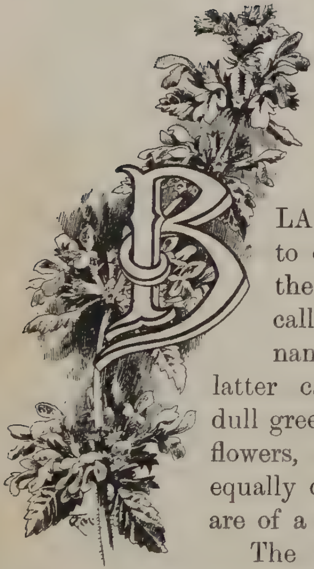
Ivy garlands and wreaths are largely used in the decorations of Christmas time, but in the past very considerable opposition was raised to its introduction in churches, owing to its intimate association with Bacchus, it being in classic days dedicated to the God of Wine. It was an old idea—we find it in Pliny and other ancient writers—that the wearing of a wreath of ivy neutralised the intoxicating effects of wine. Ivy was also in classic times the poet's crown, and Horace and Virgil, amongst others, refer to this. It was, of course, like almost everything, used in medicine in ancient and mediæval days, while in the Gothic of the fourteenth century in England and abroad its leaves and berries form a charming subject for the worker in wood or stone in choir stall, capital, or spandril.



BLACK HOREHOUND.

THE BLACK HOREHOUND.

Ballota nigra. Nat. Ord., Labiatæ.



BLACK HOREHOUND is so called to distinguish it from another plant, the *Marrubium vulgare,* popularly called the white horehound. Neither name is a very happy one. In the latter case, certainly, the flowers are a dull greenish white, but in the former the flowers, as our illustration shows, are, equally certainly, not black, though they are of a dull crimson.

The black horehound has a perennial root of a woody and fibrous nature. From this several stems arise, fairly erect, but a good deal branching from their bases, stout and strong, quadrangular in cross section, from two to three feet in height, covered over with soft hairs. The leaves are arranged in pairs on the stem, each pair being at right angles to the pair it succeeds. They are stalked, ovate in form, their margins coarsely serrate, dull green in colour, their surfaces clothed with soft grey hairs, and the veining rather conspicuous. The whole plant has a rank, disagreeable smell. The flowers are arranged in more or less dense rings at the axils of the leaves, and are ordinarily of a dull purplish red, but occasionally varying to white, as so many other flowers do—as, for instance, hyacinth, bugle, heather, meadow crane's-bill, violet. The flowers are of the well-known labiate type, as in the thyme, marjoram, calamint, ground-ivy, selfheal, betony, stachys, henbit, dead-nettle, and other examples. The corolla of the horehound has its upper lip erect and slightly concave, and the lower lip cleft into three, the lateral lobes being considerably smaller than the central ones. The calyx is tubular, its mouth having five short spreading teeth terminating in a stiff bristly point. The body of the calyx is sharply ridged and furrowed, having ten conspicuous nerves or ribs.

The black horehound is one of the commoner plants, but it can scarcely be considered very attractive, and therefore gets overlooked. Its flowers are somewhat dull in colour; its leaves, grey already from their covering of soft hairs, are the greyer from the accumulation of road-side dust that these hairs collect and retain; while its strong, unpleasant smell—which one writer, we see, goes so far as to describe as fœtid—does not enhance its popularity. It is a growth of the waysides and the waste grounds, and, like divers other plants, seems by preference to grow around the haunts of men. It is found in flower from June to October.

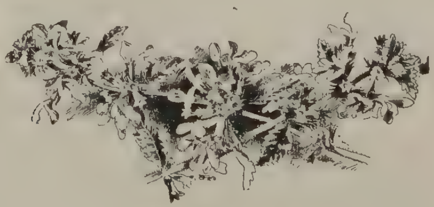
In deference to the susceptibilities of our readers we introduce this plant to them by one of its commonest names, but we are bound, in the interests of truth, to admit that another name, at least as common and a good deal more expressive, by which it is known, is the stinking horehound. The generic name, *Ballota,* is another testimonial to the fragrance of the plant, as it is derived from the Greek word *ballo,* I reject. The Greek name for this, or probably some other plant, was *ballote:* we find it in use as early as the time of Dioscorides. When Dioscorides lived appears to be not quite certain, but as the margin of time allowed is something between B.C. 30 and A.D. 68, either of the dates gives us a very respectable antiquity. He is the great authority for most of the old Greek names of plants. His "Materia Medica" was the first of these ancient botanical works to be printed, a Latin version of it appearing in 1478, and in less than a century it ran through over twenty large editions, and was held in great repute.

Many of the labiate plants are somewhat malodorous, and especially when bruised. We may instance the ground-ivy and the white dead-nettle, but really we should scarcely be disposed to pile such a wealth of vituperation upon the horehound as has befallen it. It seems so entirely a case of giving a plant a bad name, and then nothing is too strong to add to its evil record. The German name for the plant, *Gottesvergus,* is particularly crushing. It has been suggested that the name horehound is compounded from two Anglo-Saxon words signifying the hoary honey-yielding plant; but, as other authorities find other derivations on quite different lines, we can only feel that in this, as in so many other plant names, the original significance has been lost in the mist of ages, and that all that remains to us is more or less acceptable guesswork.

Dioscorides declared that the *Ballota* was an antidote for the bite of a mad dog, a fancy that we meet with in the "Faithful Shepherdess" of Beaumont and Fletcher, where we find the lines—

> "This is the clote bearing a yellow flower,
> And this black horehound: both are very good
> For sheep or shepherd bitten by a wood-
> Dog's venom'd tooth."

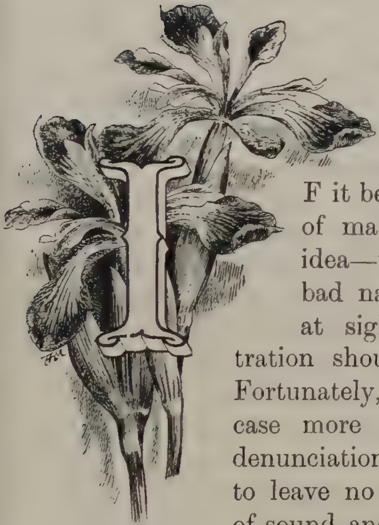
Wod is the Anglo-Saxon for mad, and as wod, wood, or wode is frequently met with in the Old English writers. The plant has been used for hysteria, gout, and other ailments, but has failed to make good its ancient repute. The horehound that figures to the present day as a remedy for coughs and other pectoral troubles is the white horehound. An infusion is made from its leaves by pouring boiling water on them and concocting a sort of tea. Sometimes a syrup, a more potent preparation, is employed, or the herb is candied. Like the black horehound, it is a plant of the waysides and rubbish heaps, but in spite of its specific title, *vulgare,* it is not at all commonly met with.



GLADDON.

THE GLADDON.

Iris fœtidissima.
Nat. Ord., Iridaceæ.



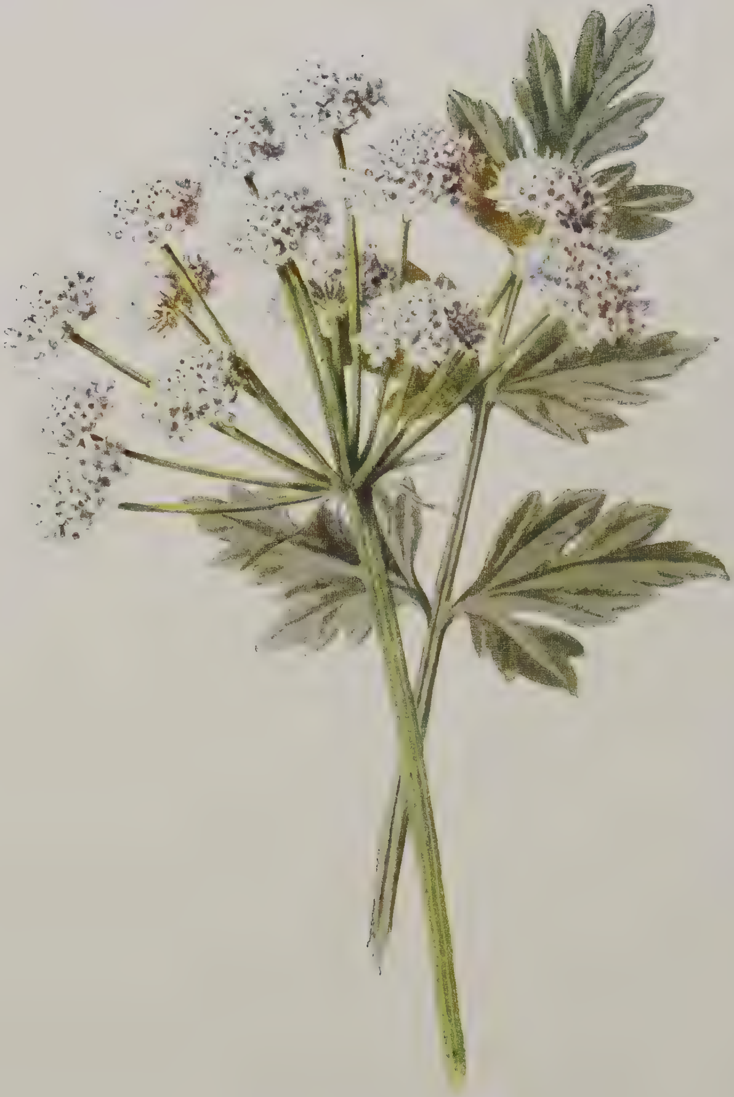
If it be true—and the general opinion of mankind seems to confirm the idea—that having given a dog a bad name, he may as well be hung at sight, the subject of our illustration should be in a bad way indeed. Fortunately, however, it seems to be a case more on a par with those terrific denunciations at Rheims which appeared to leave no one a penny the worse, full of sound and fury, signifying nothing. In consideration for the feelings of our readers, we have suppressed in our title the non-commendatory prefix, but, truth to tell, the old herbalists always call our plant the stinking gladdon, while the sonorous Latin superlative, *fœtidissima,* most repulsive, clenches with a vengeance all the evil that can be brought against our charming little Iris flower. Bentham, we see, in his excellent handbook, describes the plant as "smelling disagreeably when bruised." The moral, therefore, would appear to be that sensitive folk should be content to admire the flower without pounding it up. Few things—and the delicate little Iris blossom is no exception—are the better for being scorned and pulverised. Hooker, in like manner, declares that "the leaves, when bruised, emit a very disagreeable odour." To some, however, this odour has been compared to roast beef; hence another common English name is the roast beef plant. This is indeed a case where opinions differ, and we imagine that even the most ardent advocate of vegetarianism would scarcely go the length of calling a sirloin *fœtidissima.*

The gladdon (prefix ignored) is a plant of the woods and copses, hedgerows and pastures, and seems to have rather a partiality for the neighbourhood of the sea. The finest specimens, and the most abundant in quantity, that we remember ourselves to have come across were growing in profusion on some rough ground within a few yards of the waves not very far along the shore to the east of Weymouth, and the particular plant from which our illustration was made was gathered in the Isle of Wight. It is a plant of frequent occurrence in the western and southern counties of England, scarcer and more local in the midlands and northern counties, fairly common in some parts of Ireland, and a very doubtful native indeed in Scotland. It should be found in flower during June and July. When met with, it is generally on the chalk.

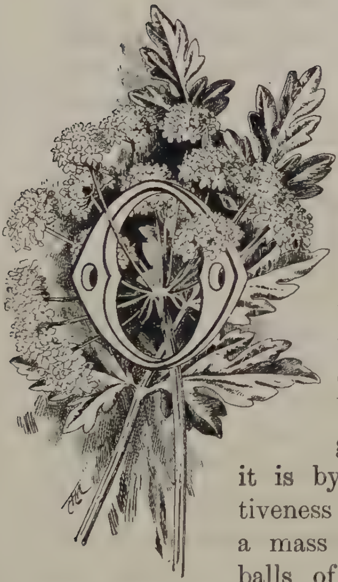
The root-stock of the gladdon is thick, and runs horizontally, creeping freely. The leaves are practically evergreen, of a deep green colour, slightly shining, and of the sword-like character that we find in the various species of Iris. From this it derives its name gladdon, *gladius* being the Latin name for a sword.

It is also known as segg, modernised into sedge, from the Anglo-Saxon *seeg*, a sword. The flower is a six-cleft perianth, the three outer segments being large, spreading, and bent back, the alternate and inner segments much smaller and more erect. The stigmas, three in number, are almost as large as the smaller perianth segments, petaloid in character, and covering the stamens. These stamens, three in number, are inserted at the bases of the outer segments. The perianth is purplish-blue in colour and considerably veined. Culpeper, we see, describes it as a dead purplish-ash colour with some discoloured veins, a description that appears to us by no means to do justice to it. After the flowers come the fruits, three-celled capsules about three inches long, and bluntly three-angled. When these are ripe the valves open throughout their length, and we see the numerous berry-like seeds. As these are a bright orange-scarlet they are very conspicuous. They remain very much in evidence all through the autumn and winter, but presently shrivel up and turn a dull, dark red. Occasionally the plant is found having the perianth of a pale yellow; examples have been recorded from the Isle of Wight, Hampshire, and Dorsetshire. This has been distinguished by some writers as the *citrina* variety. The generic name Iris has been bestowed on the plants composing it, from the Greek word for rainbow, on account of the beautiful and varied tints of the different species. This diversified colouring is a charming feature in the multitudinous varieties of Iris in cultivation by the florists. The other wild species of Iris that we have indigenous in Britain, the yellow flag, *Iris Pseudacorus*, which is so abundant by the sides of our streams, we have already figured.

The gladdon, like most other plants, has been employed in rural medicine, but it is violent and uncertain in its action. A decoction of the roots sliced in water or ale has been used as a remedy for cholera, and the dried leaf powdered in wine was supposed to help those troubled with cramps and convulsions. "The root, boiled in vinegar, and laid upon any tumour or swell, doth very effectually dissolve and consume it." Much doubtless depended on the faith of the patient in these rustic remedies, and on his iron constitution to withstand their effects.



HEMLOCK WATER-DROPWORT.



THE HEMLOCK WATER-DROPWORT.

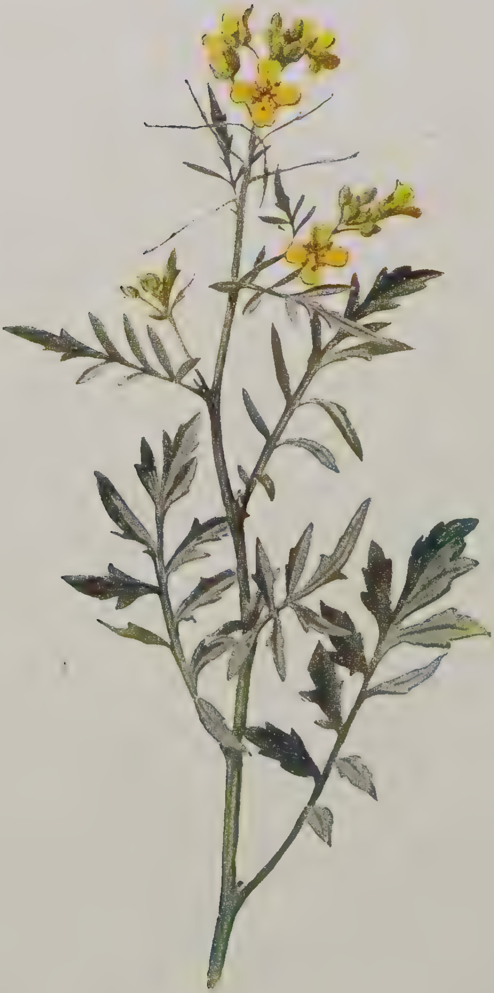
Œnanthe crocata.
Nat. Ord., Umbelliferæ.

OUR present subject, with its somewhat lengthy name, is one of the commonest of our aquatic plants, growing not actually in the water but on the margin of the stream or watercourse. While one of the most dangerous of all our wild plants, it is by no means wanting in attractiveness and stately grace, as it rises, a mass of glossy foliage and snowy balls of blossom, some four or five feet above the herbage. It is perennial, and will be found in flower about July.

The root consists of a number of spindle-shaped tubers, containing an acrid and evil-smelling yellow juice. The stem is erect and stout, cylindrical in section and grooved, hollow, freely branching, and exuding, like the root, a juice that yellows on exposure to the air. The leaves somewhat resemble those of the celery, a resemblance that has led oftentimes to fatal results. Their form may be gathered from our illustration, though the lower leaves are very much larger and much more deeply and numerously cut up. They are conspicuously veined, a deep green in colour, and having their edges serrate: these serrations are few in number, but deeply cut. The inflorescence is umbellate, the umbel being composed of a very varying number of radiating stems, anything from eight or ten to twenty. These umbels terminate the various lateral branches, and the general mass of flowers, as of the individual clusters, is what is termed sub-globose, approaching the spherical. A ring of bracts will be found both at the base of the general umbel and also at the bases of the smaller umbels that form each cluster, building up the total mass of blossom. The outer flowers in each little cluster are irregular in form, sterile, and borne on stalks, while the central flowers are smaller, regular, almost stemless, fertile. The petals, as in all the other umbelliferous plants, are five in number, obcordate, and having their points bent inwards, a very common feature in the flowers of this great natural order.

The generic title *Œnanthe* is derived from two Greek words signifying wine and flower, in allusion, we are told, to the vinous odour of the blossoms. This odour, however, is by no means suggestive of any vintage product that would find favour with the connoisseur in such matters. Theophrastus and Dioscorides applied the name to some plant or other, but as both these venerable authorities have been dead something like two thousand years, it is permissible to feel a little doubt as to what particular plant suggested the name to them. Matthiolus, writing in 1583 on the works of Dioscorides, appears to have been the first writer who definitely assigned the name to this genus, and Linnæus confirmed it. So, in the presence of these great authorities, if we still fail to detect the wine-like odour, we must be content to feel that our sense of smell is not all it should be, and make the best of a bad job, and be thankful that the sweet fragrance of the violet, the delicate odour of the wild rose, are still within our powers of appreciation. *Crocata* signifies saffron-coloured: should any of our readers ask why the name is applied to the plant under consideration, we can but reply, "Why indeed?" or at best hazard a guess that it may have been bestowed from the yellow juice that the plant yields, and which would be held a conspicuous feature in the days when every plant was held to have medicinal virtue.

The prefix, hemlock, is not very happy, as the foliage is more like that of celery than that of the hemlock, though the two plants have a certain general resemblance. Dropwort, it is suggested, arises from the tuberous roots. Other names for the plant are horse-bane, five-fingered root, and dead-tongue. This latter name was given from the paralysing effect of the plant on the organs of speech. No British wild plant has been responsible for more fatal accidents than the one now under consideration, though such a record has only accrued through gross carelessness and want of observation. A party of workmen repairing a breach on a towing path dig up the plants and fall to on the roots, thinking they have lighted on some parsnips; another party, working in the fields, think that a few of the leaves with their bread and cheese will give a pleasant relish to their meal, the result in each case being death within three hours. The amount eaten has naturally some influence on the result, and a prompt emetic may save life; but when one reads of eight boys eating the roots and five of them dying, while the others had violent convulsions and lost their reason for many hours, one cannot avoid the conclusion that parsnips of the dropwort variety, and celery sandwiches in which the leaves of this plant are a leading ingredient, are best left severely alone. The plant has occasionally been used in medicine, but its remedial efficacy has never been established, while its action is too virulent to make its use at all advisable. It has no place in the modern pharmacopœia.



CREEPING YELLOW CRESS.

THE CREEPING YELLOW CRESS.

Nasturtium sylvestre. Nat. Ord., Cruciferæ.

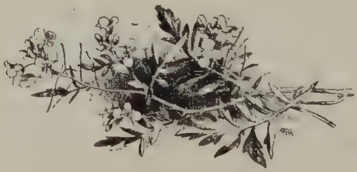
We have elsewhere in this work given an illustration of the plant that at once rises to one's mind when the word water-cress is mentioned. This so well known herb does not, however, at all exhaust the possibilities in this direction, the present illustration being a proof to the contrary; and we might even go on, and on some future pages bring forward yet other examples to add to our store of water-cress plants. As the common water-cress of our markets and breakfast-tables—the *Nasturtium officinale*—is a popular article of food, it is familiar in appearance to thousands of people who have only seen it as an edible on their tables, or have noted large beds of it growing in a cultivated state as they have sped past it in the train, but who have never seen it in a wild state, and who, if it be not uncharitable to say so, would never have given it any consideration if they had. The present species, the creeping yellow cress, *Nasturtium sylvestre,* would probably, if tested, prove as pleasant an edible as its better known brother, but as it is not so utilised it is necessarily only known to a much smaller number of people. It is, moreover, a less abundantly distributed plant.

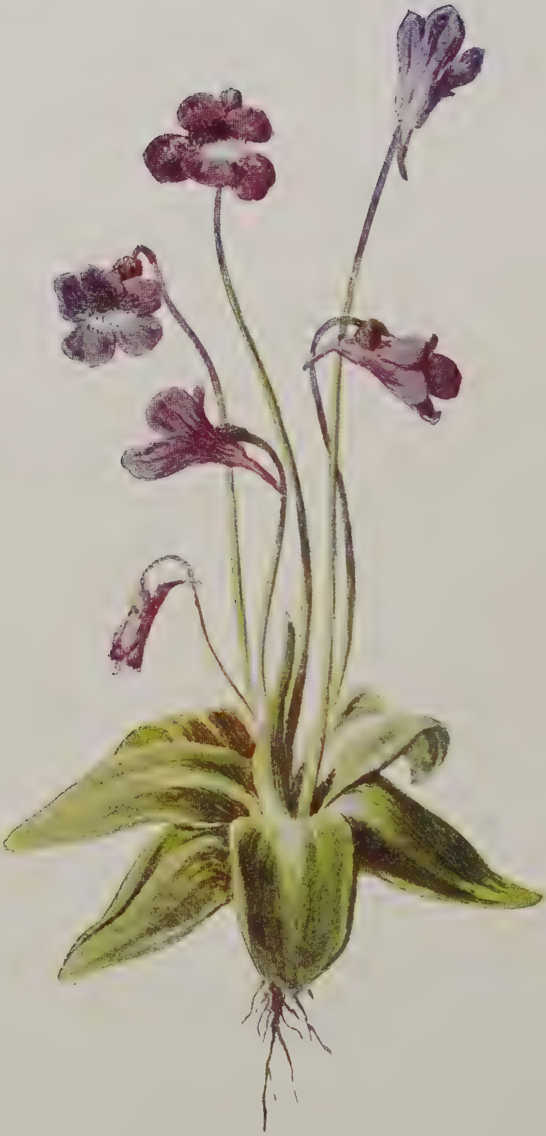
The common water-cress is frequently found in brooks and streams, covering large areas with its glossy foliage. In a house by the banks of the Kennet, where we spent many happy years, five minutes' manipulation of a rake at the water's edge would produce us a dish of water-cress that was the delight and astonishment of our town visitors. It was, of course, somewhat astonishing, when one has thought of water-cress as a something delivered by the greengrocer in penny bunches at the side door, to see a dish heaped up with what at town estimate would be about ten shillings' worth. The only drawback to our happiness was that we presently found that our farmer-neighbour's horses across the stream were as appreciative of these succulent dainties as ourselves; and though old grey Dobbin was probably as innocent of glanders as a blackbird, the idea was not altogether an agreeable one.

The creeping yellow cress is found on damp, low-lying ground, such as marshy common land and by the sides of streams, while the common water-cress is found in the stream itself, a truly aquatic plant. Hooker describes the yellow cress as "not common; very rare in Scotland," and Bentham, we see, writes of it as "sparingly scattered over England and Ireland, and still more rare in Scotland." The particular piece we here figure we gathered on the banks of the Thames at Mortlake, at the spot more readily perchance identified by our readers as that where perhaps Oxford, or possibly Cambridge, scores a triumph in the great annual contest between their rival crews. All along this portion of the upper Thames the plant is common enough, and a shilling return ticket from the heart of London should place specimens of the yellow cress in the herbarium of any of our readers. The plant is a perennial, and is found in flower during June, July, and August. From its inconspicuous character it needs some little seeking for amidst the coarse herbage that one generally finds by the edge of the water.

The roots and stems creep very freely, and thus enable the plant to take possession very surely of the ground, these extending stems also rooting at intervals as they spread. This characteristic gives it its title of "creeping." The flowering branches ascend in a more or less erect direction, and attain to a height of a foot or so. They are, as may be noticed clearly in our illustration, somewhat angular in character, not going straight up, but zig-zagging, changing direction slightly at the points where leaves or subordinate branches are given off. This throwing off of branches, especially near the summit, is a feature to observe. The foliage is of the pinnate or feather type, a series of leaflets on either side of a central stem, the terminal leaflet being ordinarily larger than its fellows. These leaflets are mostly deeply serrated, and the more so the lower their position on the plant, the upper ones being smaller, narrower in proportion, and slightly serrate or entire. Even in the small portion we are able to represent in our drawing this change in the character of the foliage from its position on the plant is readily noticeable. The flowers are small and yellow, the sepals and petals—the plant being one of the great cruciferous order—four in number. The pods are very slender, and each contains two rows of small seeds.

The generic name is from the Latin *nasus tortus*, a nose convulsed, a name given from their pungency by the ancient Romans to various plants of this type. Cress, we are told by some writers,is from the Latin *crescere,* to grow, from the rapidity of growth of some of the kinds. Those of us who have set mustard and cress will sympathise with this idea; but others would have us accept the word as a corruption from cross, in allusion to the cruciform flowers. In French it is *cresson,* in Italian *crescione,* in German *kresse.*





BUTTERWORT.

THE BUTTERWORT.

Pinguicula vulgaris.
Nat. Ord., Lentibulariaceæ.

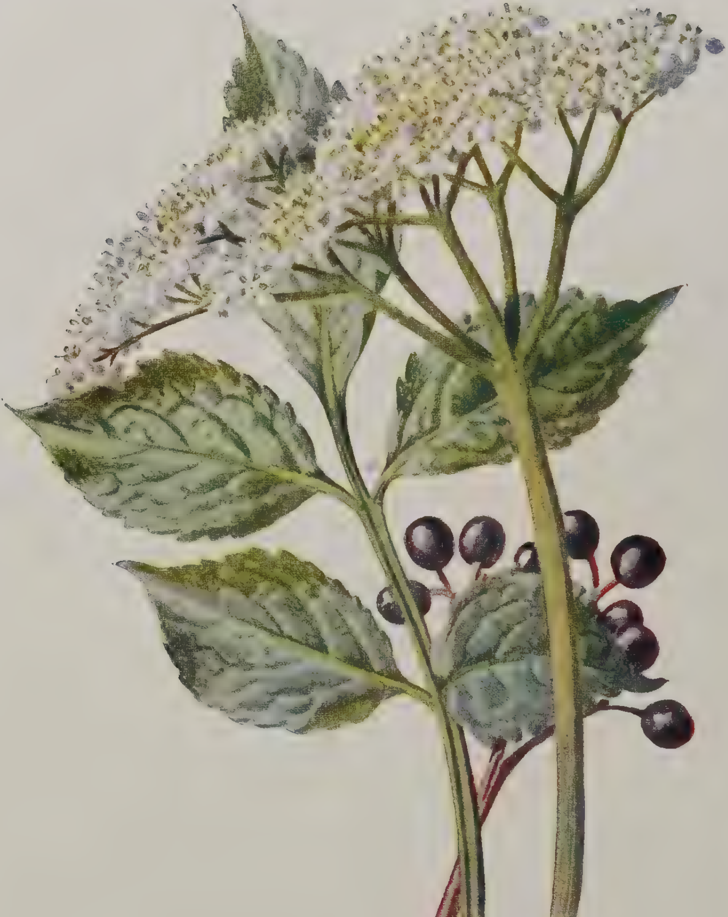
THE butterwort is one of the characteristic plants of the bogs and marshes, growing also on moist heaths and banks, or among the rocks at the margin of some mountain stream. It is a perennial, and flowers somewhat early, ordinarily from about May to July. Our drawing, we see, on reference to our diary, was made on June 19th, but the plant had been in flower some time before that. It is a plant really of the North, of Scandinavia and Siberia, and is only found in Central or Southern Europe on the mountain ranges. In Britain it is more especially to be found on the high grounds in the west, the Mendips and such-like elevations, in Wales, and in Northern England, Scotland, and in Ireland, the humidity of the Irish climate being entirely in its favour. The particular specimens from which our illustration was made came from a wild Yorkshire moorland.

The leaves of the butterwort are very spreading, forming a kind of rosette on the ground: this feature may be very readily seen in our drawing. They are of a drawn-out pointed oval in form, of a curiously fleshy, succulent character, and covered over with minute, raised, crystalline points that give a glutinous feeling to the touch. All the leaves are radical, spring directly from the root, and have their margins one continuous line, free from all serration, crenation, or lobing. These margins turn inwards on their upper surfaces. The flower-stalks, like the leaves, are all radical in their place of origin, and from three to six inches in height; standing erect. Each bears at its summit a single flower. The calyx is two-lipped; the upper lip being split into three distinct segments, and the lower lip bifid. The corolla, bold in form, is of a rich purple colour, opening widely, having a short upper lip composed of two broad lobes, and a lower lip, longer than the other, projecting boldly out, and cut up into three conspicuous broad divisions or lobes. The corolla in rear is elongated into a slender spur. The interior of the flower, we find, is densely covered with small white hairs. The stamens are two in number. The flower-bearing stems, while erect, as we have already stated, in their general direction, are often somewhat contorted, and frequently end with a pronounced curve that has the result of throwing the flower into a drooping position. We use the word drooping, of course, merely as expressive of direction, not, as is often its significance, as implying any failing vitality. The flowers from their first opening often show this slightly pendent character; it is no indication of incipient decay. The fruit that succeeds these quietly attractive flowers is a capsule; on ripening it splits down for about half its length into two valves. It is almost as long again as the calyx. The seeds it contains are numerous and very minute.

The generic name, *Pinguicula*, is derived from the Latin word *pinguis*, fat, from the greasy, slippery feel of the foliage. Why the plant is called butterwort is not so immediately obvious. It would very naturally appear that this greasiness of texture would give rise to the idea of butter as much as of fat, and some authorities at once clench the matter in this sense. Another explanation, and an equally reasonable one, is based upon the curious property that the plant has of curdling milk. In Norway, Lapland, and elsewhere in Northern Europe, the milk of the cow or reindeer is poured on the freshly gathered leaves of the butterwort and allowed to stand for a day or two until coagulated, when it becomes a very popular article of diet.

In North Wales the peasantry use the leaves internally as a medicine in lieu of castor oil and such like abominations, and, when bruised, apply them externally for the relief of tumours and swellings. How far such uses justify themselves by their success we cannot say, and we should desire it to be very clearly understood that if, as a consequence of reading this, any of our readers are inspired to test the matter, and, possibly, in so doing, turn a small evil into a great one, we entirely disclaim all responsibility. Some of the remedies used by the rustics in our rural districts are excellent, while in others charlatanism, superstition, credulity, are the leading ingredients.

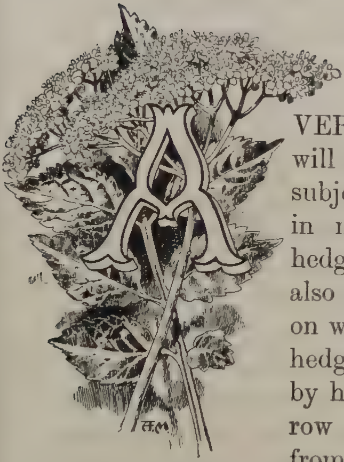
One pretty local name for the plant is bog-violet, but most of the other popular names are not so flattering. As sheep pastured on low-lying, damp ground are very apt to get diseased, the farmer does not blame his stupidity for putting them there, but looks around for something to vent his opprobrium on; and the plants that grow in these marshy spots fall easy victims to his denunciations. As a matter of fact the sheep do not touch the butterwort, or the marsh pennywort, but these are classed together as white rot, rot-grass, sheep-bane, and such-like uncomplimentary titles, and held responsible. Where both are regarded as so equally guilty the rustic takes little trouble to discriminate, and they share and share alike in this vocabulary of vituperation, as indeed do several of their companion flowers, all held equally responsible for growing in a marsh, and for all the consequences, real or imaginary, that spring therefrom.



ELDER.

THE ELDER.

Sambucus nigra.
Nat. Ord., Caprifoliaceæ.



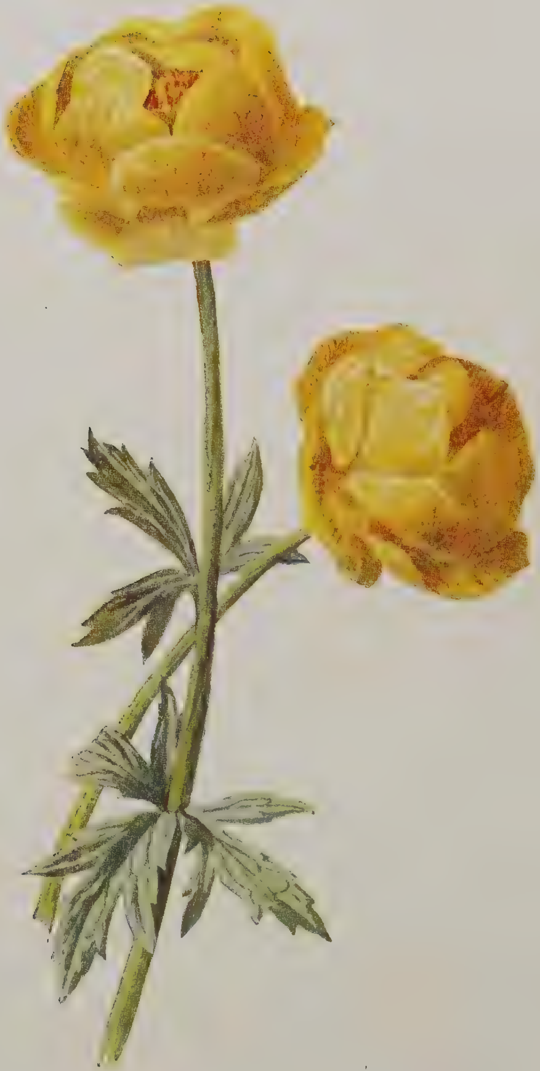
A VERY short sojourn in the country will suffice to introduce us to the subject of our present figure, as it is in most districts a very common hedgerow plant, and it may be found also in the woods and copses, and on waste lands. When found in the hedgerows it probably arrived there by human agency, though as a hedgerow plant, to shelter or to defend from intrusion, it has not the value of hawthorn, maple, blackthorn, holly, and divers other ingredients that go to compound our picturesque old country hedges, since it grows in a somewhat open, straggling way that suggests to the trespasser great possibilities of successful attack. In Worlidge's "Mystery of Husbandry"—our copy is dated 1675—the elder is included in the "trees necessary and proper for Fencing and Enclosing of Lands." "A considerable Fence," he writes, "may be made of Elder, set of reasonable hasty Truncheons like the Willow, and may be laid with great curiosity; this makes a speedy shelter for a Garden from Winds, Beasts, and such like injuries," though he adds, and emphasises with italics, "rather than from *rude Michers.*" The word micher is now obsolete, but it means a lurking thief, a skulking vagabond.

Culpeper, we see, declares it "needless to write any description of this, since every boy that plays with a pop-gun will not mistake another tree for the elder," and so he says no more about it. There is a weird fascination in this way of treating the subject, but after all there may be amongst our readers even some few who have never made a pop-gun, or would like to know a little more of the plant than its possession of these hollow stems, or, rather, easily hollowed stems; and in any case, to preserve the general symmetry of our pages, we cannot simply class the elder amongst the *Popgunaceæ* and feel that we have done all that is necessary.

The elder under favourable conditions becomes a small tree. Gerard calls it "a mean tree," but that seems needlessly severe. The trunk is covered with a rough, grey, cork-like bark, and the wood is of even grain and of some little value for the turner. The lesser branches are green, and filled with a white and spongy pith. The leaves grow in pairs on the stems, the leaflets, pinnate in their arrangement, having their margins sharply serrated, and varying in number from five to seven. The flowers are very numerous, and grow in large terminal clusters. Ordinarily five branches are given off, and these principal stems fork and re-fork, as may be clearly seen in our illustration, until the final result is a large and nearly flat-headed mass of blossom. The calyx is small and finely cleft, while the corolla is ordinarily composed of five segments, though the number is liable to change a good deal. Out of one hundred elder flowers picked indiscriminately we found that sixty-eight had the corolla five-lobed, while the remaining thirty had four lobes, the number of stamens in each case agreeing with the number of lobes. All were equally perfect in form, those having the parts in fours being as free from any appearance of distortion as those having the normal number. The anthers are large and very conspicuous. The berries that succeed the flowers are succulent in character, almost round in form, and of a purplish-black colour. Besides the manufacture of pop-guns and whistles, manufactures centuries old, as references in Pliny's writings testify, the elder has many uses. In a curious old volume entitled "Anatomia Sambuci," published about two hundred and fifty years ago, the different parts of this tree were treated of and extolled as specifics for most of the ills that torment humanity, and to the present day the resources of the doctor include *Aqua Sambuci*, elder-flower water, used as a vehicle and for flavouring medicines, and *Unguentum Sambuci*, elder-flower ointment, a mild, cooling preparation. The flowers were used by our forefathers in bronchial and pulmonary affections and in scarlet fever, measles, and other eruptive diseases, while the berries were held to be efficacious in rheumatism and erysipelas, and the bark was employed in cases of dropsy. There was at one time an idea that the malodorous scent of the flowers drove away the various kinds of insect life that work evil to the farmer, and it was on that ground sometimes planted; but the more frequent cause, no doubt, of its cultivation, was that from its wealth of fruit a kind of wine was brewed, while it has been not obscurely hinted that even a beverage bearing the prouder name of port wine has at times owed somewhat to the elderberries of our shires.

The English name has come down to us from Saxon times. The generic name, *Sambucus*, is Greek in its origin, and refers to the sambuca, or sackbut. The difficulty, however, of accepting this is that the sambuca was a stringed instrument, while anything made from the elder would doubtless be a wind instrument, something of the nature of a pan-pipe or flute.

An allied species, the dwarf elder or danewort, *S. Ebulus*, may be occasionally met with.



GLOBE FLOWER.

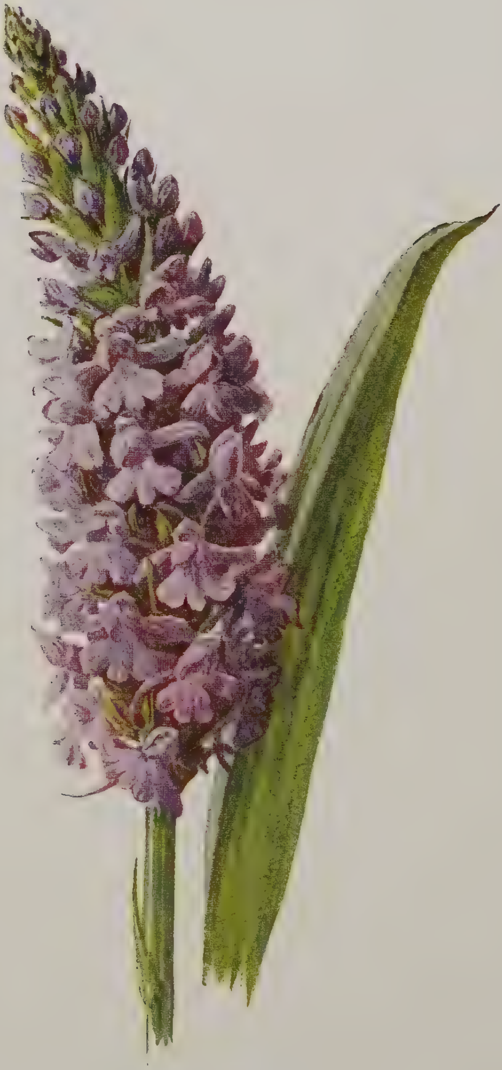
THE GLOBE FLOWER.

Trollius Europæus.
Nat. Ord., Ranunculaceæ.

It seems scarcely necessary, on the most cursory glance at our plant, to refer to the natural order to which the globe-flower belongs, as it so evidently suggests the idea of a buttercup, and, surely enough, it is in close relationship to our various British ranunculuses. Elsewhere in this work we figure and describe the snow-white water buttercup that floats and flowers on the surface of our gently flowing streams or placid lakes; the lesser spearwort that lines the sides of our streams, or finds congenial home in the marshlands; the little pilewort or celandine, beloved of Wordsworth, and one of the flowers of the opening year; the wood-crowfoot, so great an ornament of the woods and copses; the upright meadow-crowfoot, towering above the herbage in our pastures; the corn-crowfoot, with its small blossoms and quaintly formed fruits, a plant especially found in cultivated ground; and the bulbous crowfoot, the best known of all, a plant of the meadows. All these are ranunculus flowers; all common, and all attractive in their blossoms and richly cut foliage. To these we now add a plant of very near kinship, the globe-flower.

The globe-flower is a perennial, and should be sought for in moist woods and mountain pastures, and by mountain streams, its flowering period being June, July, and August. It is essentially a plant of the uplands, and occurs in Scotland and Wales under these conditions, and it may also be found in the mountainous districts of Ireland. It is also to be met with under congenial circumstances in the northern counties of England, Worcestershire being its southern limit, in a wild state. Its attractive appearance has led to its introduction into the garden; but to those who know it in its mountain retreats its transfer to the trim flower-bed is as sorry a sight as a caged otter or clip-winged eagle transferred from its home in wild Nature to adverse and uncongenial environment.

The whole plant is smooth to the touch, and stands with sturdy erectness, branching but little, if at all, and attaining a height, in fine specimens, of nearly two feet. The radical leaves are large, cut into five deep and spreading segments, which are in turn deeply cut and boldly serrated. The stem leaves are few in number, considerably smaller, and nearly or quite stalkless. In all the foliage of the plant the veining is a conspicuous feature. The flowers are of bold form and considerable size, and, as in the case of the marsh marigold, a very near relative, and a plant dealt with in our pages, the sepals are very petaloid in character; the floral form we have here delineated being almost entirely that of the calyx, and only a small portion, which we can detect in the centre of the flower, being the corolla. These sepals, ten or more in number, are very concave in form, and give, in the aggregate, a sufficiently globular appearance to the whole to account amply for the plant being called the globe-flower. The petals, ten or more, are very small, and narrow in proportion to their length, and if we took a pair of scissors we might fairly hope to cut up any one sepal into eighteen or twenty strips that would represent petals. Each petal has the nectariferous pore at its base that is so characteristic a feature in the buttercups. The numerous stamens are about as large as the petals, and therefore nearly or quite invisible unless deliberately sought out from the concealment effected by the great enveloping sepals. Each stem rarely produces more than one flower. Like the ranunculuses, the plant has acrid properties, and if we are to believe some of the authorities on plant nomenclature, this burning quality is the cause of its generic name, *Trollius;* and of one of its popular names, the Troll-flower. The Swedish word *troll* is the name for a supernatural being of special malignity, and the globe-flower, having some touch of evil in its nature, has to share name and reputation with this highly objectionable creation of the Norse imagination. The fact that the plant is also in Scotland called witches'-gowan lends additional support to this derivation; but then other authorities, as reliable, give us a much cheerier explanation, and tell us that in old German *trol* means a globe or ball, and therefore this very globose flower is most naturally *trollius*, and we get the same idea again when boy or man is driving a circular thing, like a wheel or hoop, and we say he is trolling or trundling it. The supporters of the first theory will remind us that the name was given by Linnæus, and that he was a Swede. In France the plant is the *Trolle globuleuse,* and it has been sometimes called in the north of England the cabbage daisy, a name that commences admirably well, as the overlapping sepals are certainly suggestive of a little yellow cabbage, but which terminates deplorably, as neither in form nor colour is it at all daisy-like. Other names are *Flos trollius,* Alpine ranunculus, and globe crowfoot.



FRAGRANT ORCHIS

THE FRAGRANT ORCHIS.

Gymnadenia conopsea.
Nat. Ord., Orchidaceæ.

WHILE many of our numerous examples of orchid flowers are either scentless or even malodorous, the present species carries with it so agreeable a fragrance that it quite scents the air, and thus it bears in its name a testimony to its special and distinctive charm; though we may hasten to add that this is by no means its only attraction, as its long spike of rosy-purple blossoms appeals equally to the eye. It is one of the baldest of truisms to declare that tastes differ, and we may see in our present volume how one of the wild irises, the gladdon, is branded by some observers as fœtid, while other connoisseurs of floral fragrance detect in it the less objectionable odour of the national roast beef. We shall not, therefore, be at all surprised if we learn that our commendations of the orchis before us are held by some to be ludicrously exaggerated.

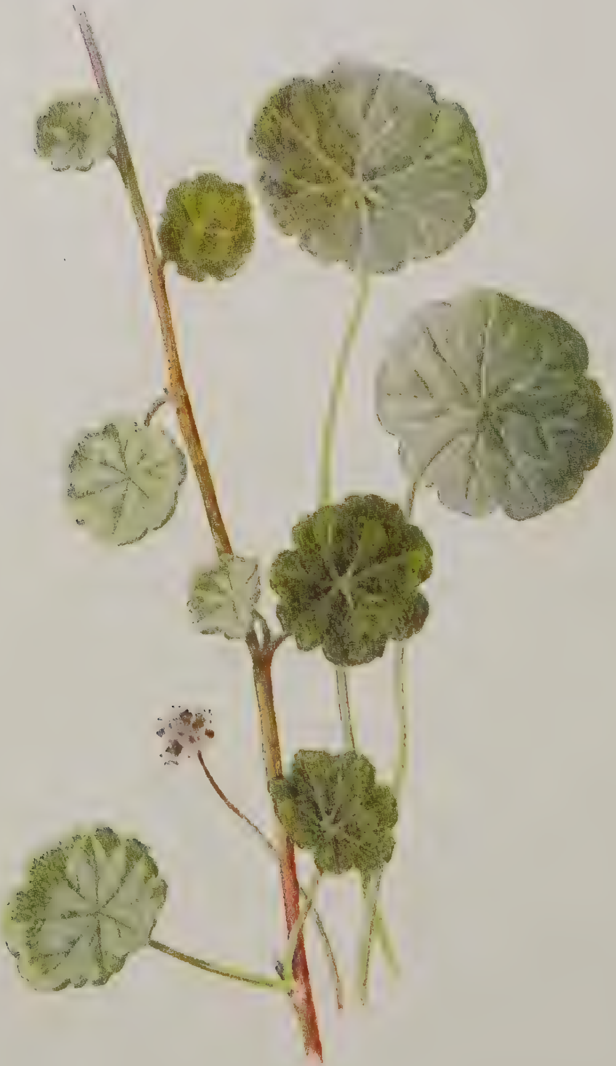
The fragrant orchis should be sought for on dry pasture land, heaths, chalky banks, and open moorland, in mountainous or at least hilly districts. It is fairly common all over England in suitable localities, is found freely in Ireland, and is more especially abundant in Scotland. The particular specimen we figure, a fine one, was gathered on a Yorkshire waste. It is widely distributed, extending over the northern parts both of Europe and Asia. It is a perennial, and will be found in flower during June, July, and August.

The plant bears at its base two tubers, spreading out something like fingers. The root-stock produces each year one of these fleshy tubers, and this is found alongside the decaying tuber of the preceding year; and it is, of course, from this fresh tuber that the flowering stem for the next season is thrown up. The two tubers, therefore, represent decay and renovation. The stem may be anything from a few inches to about two feet in height. This stem is leafy at its base, and carries some small scales, one of which our illustration shows, and terminates in a head of flowers from one to five inches long. The leaves, two to six inches long, are thrown off alternately from the lower portion of the stem, and are of the type known as linear-lanceolate, a somewhat attenuated spear-head form, such as we see in many plants. They are folded down their centres, and more or less recurved. The lip of the flower is three-lobed, the lobes being rounded in form. The two lateral sepals, it will be seen, are widely spreading. Each flower has a very conspicuous spur at its base, and the whole blossom is of one colour, a rosy-purple, not streaked, or spotted, or blotched in any way. As divers species of orchis are thus streaked or otherwise marked, this absence of marking is a feature to note.

The plant is sometimes classed as *Orchis conopsea*, its exclusion from this genus and its inclusion in *Gymnadenia* by other authorities arising from some slight difference in the pollen masses in the two genera. The anther-cells in the present plant are perforated at their bases, and through these openings the glands of the stalks may be seen. *Gymnadenia* is compounded from two Greek words signifying naked and gland. The baring or exposure of some feature in a plant's economy may be so marked and distinctive as to become of value in classification; hence we find amongst the names of plant genera *Gymnandria, Gymnanthe, Gymnanthera, Gymnarrhena, Gymnobalanus, Gymnocarpus, Gymnocephalium, Gymnogyne*, and several others of like type. Our present plant was classed as an orchis by Linnæus; the formation of the new genus was the work of Robert Brown, a later student of Nature. He was one of the most distinguished botanists that Britain ever produced. He was styled by Humboldt *botanicorum facile princeps*. Orchis is a term derived, through the Greek, from the shape of the roots. The specific name *Conopsea* is from the Greek word *conops*, a gnat, but what a gnat has specially to do with the fragrant orchis entirely passes our comprehension.

Amongst other *Orchidaceæ* figured in this work are the bee orchis and the butterfly orchis, the first of these having the blossoms very suggestive of a bee, while in the second flower the similitude to a butterfly is very hard to detect. The strange looking twayblade also finds a place in these pages. Others are named from their resemblance to fly, frog, lizard, or spider, but the plant now before us shows none of this quaint mimicry of other forms.

The roots were by the old herbalists used in medicine, either dried for internal use, or bruised and applied externally. "These roots alter every year by course, when the one rises and waxes full, the other waxes lank and perishes. Now, it is that which is full which is to be used in medicines, the other either being of no use at all, or else, according to the humour of some, it destroys and disannuls the virtues of the other, quite undoing what that doth." Thus wrote Nicholas Culpeper in his "English Physician," published in 1652; but the modern pharmacopœia values neither one root nor the other, and has found quite other and more efficacious remedies for the string of ills that orchis tubers, lank or otherwise, were set to combat and control.



MARSH PENNYWORT.

THE
MARSH PENNYWORT.

Hydrocotyle vulgaris.
Nat. Ord., Umbelliferæ.

AS we walk across some open common or stretch of wild moorland, we may presently find ourselves in what in some parts of the country the people call a "bottom," a little dip or valley. The fall may be to the eye inconsiderable, but we all at once awake to the fact that the ground has lost its firmness, that we are getting on to a spongy, miry patch, and unless we are very keen indeed on going straight ahead we find it advisable to go a little way round. But if our walk be botanical in its aim, and especially if our present desire be to procure some marsh pennywort, we at once realise that we have arrived at an excellent hunting ground, and proceed to make the best of our opportunity. Such opportunities are only possible in a thoroughly wild, unsophisticated bit of genuine country. Directly the County Council or other local authority begins to lay out this "open space" for the people, these swampy patches have to be drained or filled up, to satisfy the ideas of the sub-committee.

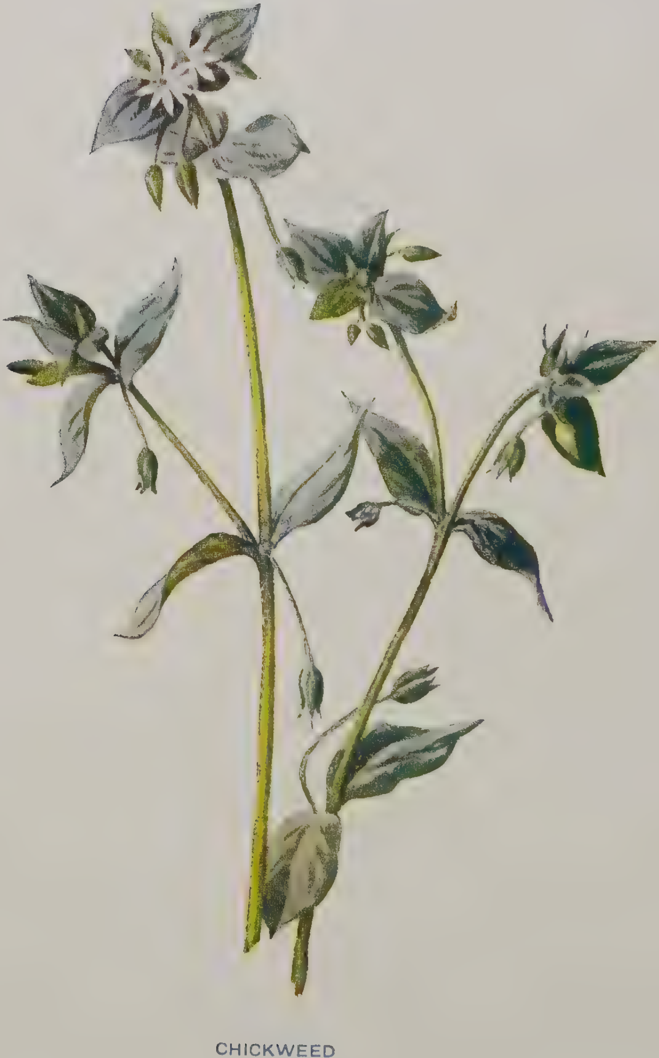
The band plays, and everyone is supposed to be quite happy, no one seeming to know or care that to some folks a notice to "keep off the grass" pales in interest before the thought of those delightful days when the marsh pennywort and its fair companions were the pleasure and the prize of those who wandered far from the madding crowd into Nature's garden. It has been our fate to see many such "improvements," and when we recall what a delight these happy hunting grounds were to ourselves in our younger days, we cannot quite patiently accept in their room the well-ordered rows of pelargoniums, the subtropical garden, the memorial drinking fountain to the local magnate, and all the rest of it, or feel quite content that later generations should grow up satisfied with these, and not even know what they have lost.

The marsh pennywort throws out long, perennial, slender stems, that root at short intervals. These stems spread over the soft, moist ground, and soon take possession of a considerable area. At each node, or rooting point, besides the downward-passing roots, we have rising upwards one or more leaves, and possibly also flower-bearing stems. It is a plant of very frequent occurrence in boggy land and on the soft soil by the sides of lakes and watercourses, and should be looked for in flower from about May to August. The foliage often forms dense masses, so that in looking down upon it we see nothing but a thick carpeting of it, entirely concealing the ground beneath. The leaves are peltate or shield-shaped, having their stems attached almost in their centres, a very similar form of leaf to that of the better-known nasturtium or

Indian cress of the flower garden, though these latter are much larger. The largest leaves shown in our illustration are as large as one finds them, and the great majority are considerably smaller, say from half an inch to an inch in diameter. They are slightly lobed at their edges and carried on very long stems. The flower-bearing stems are much shorter and smaller in diameter than those that bear the leaves, so that the flowers of the marsh pennywort are ordinarily quite unnoticeable unless one proceeds deliberately to search for them by pushing the leaves on one side, and even then their minute size may cause them at first to be overlooked. These flower-bearing stems terminate ordinarily in a little umbel of five or six flowers, but sometimes we may find two or even three whorls. The individual blossoms are very small, and vary in colour from pure white to a more or less pronounced pink. The petals and stamens are each five in number, and the fruit is of the characteristic umbellate type, two very flattened looking and strongly ribbed carpels, back to back, and each containing a single seed.

The genus is a large one, most of the species belonging to it being more or less aquatic, and having shield-like circular leaves. Examples are found almost all over the globe, and the generic name *Hydrocotyle*, Greek in its origin, signifying water and a cup, testifies to the habitat of the plant, and to the cup-shaped leaves, though the very slight depression one ordinarily finds would in most cases be quite sufficiently described as saucer-shaped.

The popular name pennywort clearly refers to the circular penny-like leaves, in the same way that another plant figured in this work is called moneywort or herb-twopence, the leaves growing in pairs on the stems. Another very common name for our plant is the white-rot. It was popularly supposed that sheep ate this plant and so incurred disease; but the mischief is in the locality, the damp low-lying ground, and not in the plants that thrive there. Another plant, the butterwort, figured in the present volume, has from the same mistaken idea been called the white-rot or the rot-grass. The pennywort is in some parts of the country called the flukewort or flockwort, this second name not bearing reference to flocks of sheep, but being merely a corruption of the other. Flukes are a parasitic trouble to which sheep are liable, and here again we find an attempt to lay blame on a quite innocent plant by branding it with a libellous insinuation that it is the cause of this disease.



CHICKWEED

THE CHICKWEED.

Stellaria media.
Nat. Ord., Caryophyllaceæ.

AS we were one day in the spring walking along a field path we saw great portions of the arable land in full possession of this little plant, the chickweed. Whatever the ideas of the farmer might be, here one field crop and there another, there was at least this bond of unity: all alike were on intimate terms of association with their unassuming, uninvited, and insistent companion, the lowly herb we here figure. Had the exigencies of art required it, material for our illustration could have been readily forthcoming by the cart-load. The thought came into our mind, "Surely this, at all events, is a 'familiar wild flower,' and yet we have not so far given it a welcome!" Stung with remorse, we hastened home; and so to the modest chickweed it was given to be the progenitor of the present series.

Could we trace back the ancestry of our volumes to their primeval source, we should find ourselves one brilliant spring-time in a wild piece of woodland—arrant trespassers and unbidden guests, since the gamekeeper declines to recognise botany, ornithology, geology, or any other ology, as other than an excuse to steal pheasants' eggs—and around us the ground one rich carpeting of wild hyacinths and daffodils. Some of these we brought home and made a study of for the mere pleasure in their beauty, and then it occurred to us that others might be willing to share in this pleasure. Thus to us this pleasant trespass was the precursor of many a delightful hour spent in search of subjects for illustration in the depths of the forest, by the winding river, on the breezy ozone-laden moorland, in the plashy marsh, on the sandy beach; and our efforts to realise something of the interest of our familiar wild flowers to ourselves and to others, we are pleased to know from many a kindly testimony, have not been in vain.

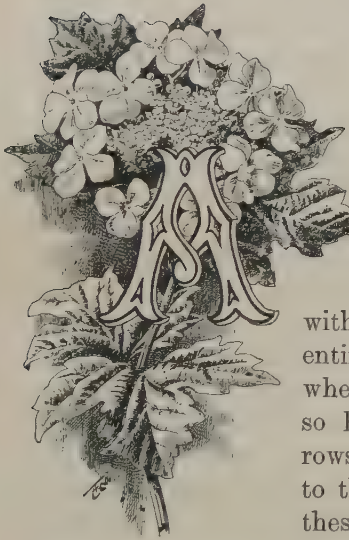
The chickweed is an annual, but as it flowers and seeds almost the whole year round its short duration seems of very little moment, as there is little fear indeed that the plant will become extinct. It is abundant amidst field crops, by roadsides, and on waste lands. The root is fibrous. The stems are weak and much branching, often lying almost prone on the ground, and at other times, if amongst other herbage, drawn up and erect, the position in which the plant finds itself making a very marked difference in its development and general appearance. When prostrate the stems will strike root here and there at their joints. These stems are smooth, except that, curiously enough, we get a line of hairs down one side. The leaves are what is termed a pointed oval, the lower ones being much broader in proportion to their length than the upper, and borne upon foot-stalks. The upper leaves, as our illustration shows, are stalkless: all are somewhat thin in texture, a bluish-green in colour, and smooth to the touch. The flower-stems each bear one flower and stand more or less erect during the flower's duration of life. When the flower has faded the stem falls, a curious and characteristic feature that may be noted in our drawing, and then as the seed ripens the stem becomes again erect. The flowers are small and of a pure white colour, the corolla being composed of five petals, each so deeply cleft that the effect to the eye is that of a ten-rayed star; hence the name *stellaria*. The stamens are rather inconstant in number, from five to ten, the anthers being purplish in colour. The seed-vessel is a capsule, splitting up, when ripe, into valves, and containing brownish-orange seeds varying in number from eight to sixteen.

The chickweed is found throughout Europe and Southern and Central Asia, and is now in process of being inadvertently carried round the world, establishing itself in all temperate lands. To the farmer it is unwelcome, as by its quickness of growth it chokes many young plants, and derives nourishment from the soil that he had intended for other occupants. On the other hand, it is a good pot-herb, an excellent substitute for spinach and equally wholesome, and much to be preferred to nettle-tops. Small birds are very partial to its seeds, and its popular name, chickweed, is a reminder of this. Like groundsel, it is hawked round for sale, and Gerard quaintly declares that "little birds in cadges are refreshed with chickweed when they loath their meat." An old name for it is the *Passerina*, from its attractiveness to the sparrows. Its medical properties are very slight, but it would appear to be of use as a cooling, soothing application in inflammatory troubles. It is also a popular item in the dietary of many insects, and is one of the favourite foods of the larva of the brilliant cream-spot tiger-moth.

GUELDER ROSE.

THE GUELDER ROSE.

Viburnum Opulus.
Nat. Ord., Caprifoliaceæ.



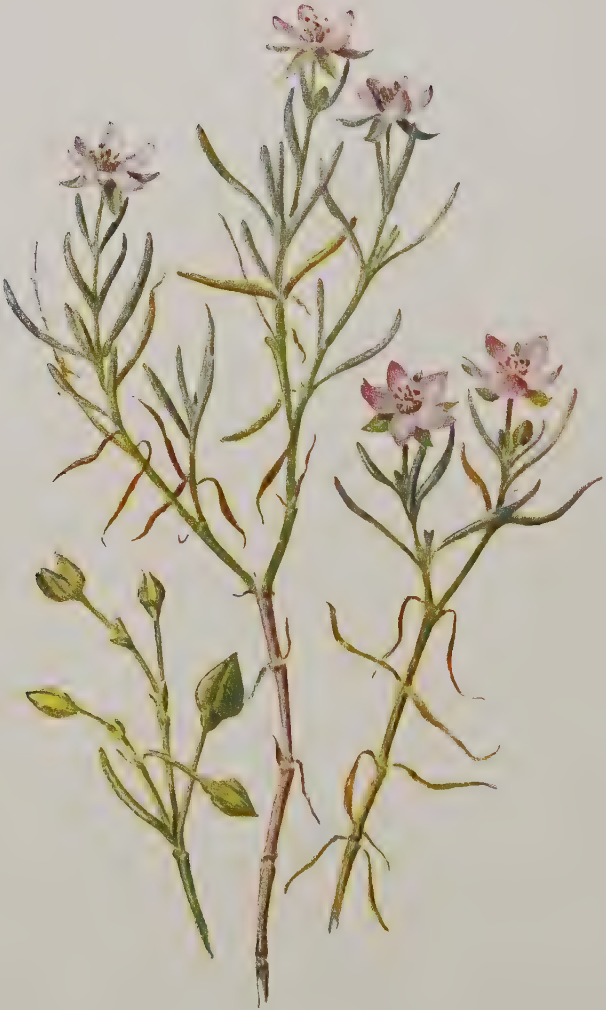
MANY of our readers, and we trust that they form the majority, acquainted with country scenes and in sympathy with rural life, will doubtless be entirely willing to agree with us when we declare that surroundings so homely as our British hedgerows contain a wealth of interest to the lovers of Nature. On this thesis the ornithologist and the entomologist would gladly enlarge no less than the plant-lover. In these latter times it has been the custom to throw into one great expanse of arable or pasture land what some fifty or even twenty years ago was possibly some half-dozen different fields or meadows. Nowadays, in this era of greater competition and depressed agriculture, hedges are held to hinder steam-ploughing, to absorb an appreciable amount of room—some of the noble old-time hedges being two or three yards thick—to impoverish the ground by their profitless roots, to cast unwelcome shade, keeping out light and air, to harbour birds and insects that are destructive to the crops, to be a place of refuge for noxious weeds, ever ready to waft their seeds far and wide; to be, in fact, entirely unfit to exist. The indictment is a formidable one, and there is no doubt much to be said from the farmer's point of view, that we others who are not concerned with the question of falling rents, or the pinching to meet rents that do not show any readiness to fall, must make full allowance for; but one parts with great regret from these picturesque old hedges. In these we meet with the tangle of blackberry, with its satin-like flowers and luscious fruit; the snowy blossoms and purple fruits of the blackthorn; the dog-rose, beautiful alike when throwing far and wide its waving festoons of graceful and fragrant blossoms, or when lavishly loaded with its scarlet hips; the no less fragrant hawthorn, with its masses of white flowers and its equal wealth of crimson haws; the quaint wax-like capsules of the spindle-tree; the equally quaint keys of the maple; the great masses of elder flower and fruit; the berries of the buckthorn; the hazel bearing its bunches of nuts, so dear to the provident squirrel and to the less provident schoolboy; and many other interesting plants that we must not stay even to catalogue; while over all Nature festoons her wreaths of bindweed and clematis, of picturesque red-berried bryony, of trailing hop, of sweet-smelling honeysuckle. In such a hedge as this the guelder rose, with its very near relative, the wayfaring-tree, will be found flourishing, and, like nearly everything else that we have named, is of almost equal interest and beauty in its summer garb or in the season of autumnal fruitfulness; when covered with its abundance of snow-white blossoms, or when loaded with its clusters of crimson berries. At this latter period, when the fruits and hedgerows burst into glowing colouring, the guelder rose is splendidly conspicuous even in the general richness of colour, as not the fruit alone, but the whole plant—stems, berries, foliage—assumes a brilliant crimson.

The guelder rose of our gardens, sometimes called the snowball tree, is merely a variety of the wild plant, in which all the flowers are abortive and form large globular heads. It is the plant alluded to by Cowper as—

> "Throwing up into the darkest gloom
> Of neighbouring cypress, or more sable yew,
> Her silver globes, light as the foamy surf
> That the wind severs from the broken wave."

The guelder rose ordinarily attains to a height of some six or eight feet. The leaves are two or three inches broad, and the same in length, ordinarily three-lobed, these lobes in turn being coarsely toothed. The leaves are in pairs on the stems, their veining rather strongly marked. The flowers grow in a dense and flat-topped cluster. The perfect blossoms are cream-coloured, small, and in the centre, and around these are abortive flowers, stamenless, pistilless, and very much larger in size; simply flat five-lobed corollas forming a very conspicuous ring of white blossoms around the circumference of the cluster. The berries are of a full, rich crimson colour; before they are thoroughly ripened the sides least exposed to the light are yellow, and this gives the bunch a very curious colour-effect. They are rather waxen in texture, and on some parts of the Continent are eaten; each berry contains one seed. It will be noted that the petioles of the leaves have a series of glands upon them. The guelder rose flowers somewhat early, ordinarily by the middle or end of June.

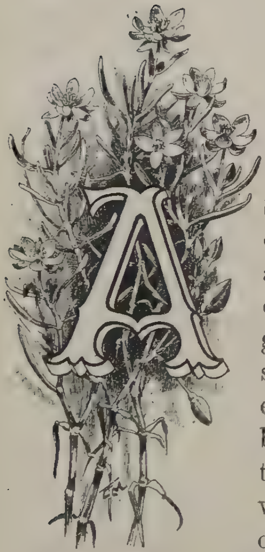
Why the plant should be called the guelder rose does not appear. In some old books it is called the rose-elder, the elder-like tree that bears flowers like roses; hence a transposition to elder-rose, plus a slight corruption, lands us at guelder rose. This is perhaps as lame a theory as one could imagine. The tree is not like the elder, the heads of flowers are not at all like roses; there seems no reason for transposition, nor for any corruption of the transposition. Others tell us that the plant is so-called from *Gueldres*, a small Dutch town; but why an indigenous shrub should have this tacked on they do not explain. Why guelder rose more than Plymouth rose? We are evidently not on the right track, and, worse still, see no chance of getting there; so the matter must perforce remain a mystery.



SEA SANDSPURRY.

THE SEA SANDSPURRY.

Spergularia marina.
Nat. Ord., Caryophyllaceæ.



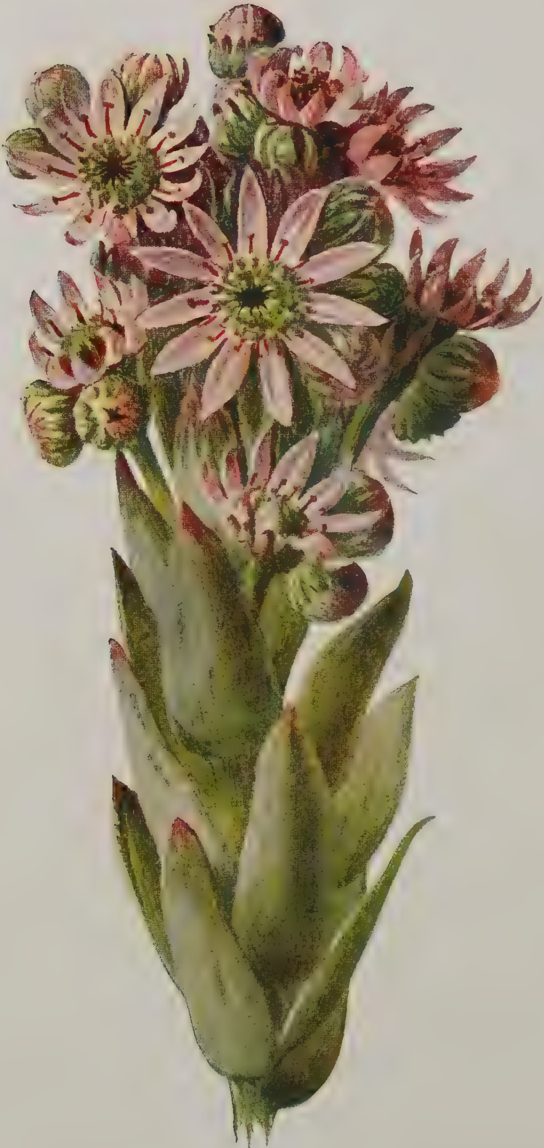
As we wander by the sea-shore and observe the plants that spring up amidst the shingle, in the clefts and crannies of the towering cliffs, that give beauty and colour to the desolate stretches of salt marsh, or fringe the earthen banks that keep within its bounds the sinuous stream on its way to the great sea in which so soon its waters will be absorbed, we are at once conscious that we are making acquaintance, or renewing it, with a markedly different flora from that of the various inland districts that have yielded up to us their botanical treasures. It is of course within the experience of all of us, plant lovers, that most of these localities have their special peculiarities, the glowing scarlet poppies, for instance, in rich profusion on the railway embankment, or their companions the ox-eyes in great sheets of brilliant white, being scarcely in evidence at all in the woodland undergrowth. But it is nevertheless true that, while the forest, the meadow, the moorland, the banks of the stream, the cornfield, and the hedgerow have a certain note of individuality, there is still much in common amongst them all.

The plants that are especially maritime are ordinarily small, and such expansion as is permitted to them does not take the bold upright growth of the foxglove or mullein, but is bush-like. These plants have to live and thrive under very hard conditions. Even the summer holiday maker who takes his fortnight or three weeks in July sees something of the great forces of Nature, may have a day or two when the stroll along the esplanade is in a much keener air than his inland home has made him used to, and when locomotion in teeth of the breeze is somewhat of a struggle. But in the winter and spring how changed the scene, as the waves, lashed by the furious gale, break in thunder on the beach, or sweep the promenade, casting up tons of shingle on its once well-tended roadway. The pathway across the cliffs is deserted, except by the coastguards, whose duty calls them to patrol it amidst the roar and turmoil, the clouds of flying spray, the sheets of blinding hail, the well-nigh irresistible power of the wind, that are the mighty forces of Nature then and there unchained. It is in such a home as this, where no stately foxglove could rear its head even in the summer gales, that a very considerable flora finds resting place and thrives, and the little plant that we here figure, fragile as it looks, has faced stress and storm that would be fatal to the plant life that is not inured to such conditions. Many of the plants of the seaside flora have their leaves of a greyish-green and more or less succulent, and the present plant, the sea sandspurry, is one of these, and where they are of branching nature, these branches, if woody, are gnarled and twisted into weird and angular masses of entanglement in their struggles against the searching winds, or are so flexible and yielding that they conquer by an apparent submission. This greyish-green colour of the foliage may be very well seen in the yellow horned-poppy, and still better in the sea-holly.

It is a moot point whether, in spite of our illustration, there be such a plant as *Spergularia marina* at all. This somewhat startling statement, coming after our introduction of the plant to our readers, certainly calls for some explanation; and it is this. Botanists have been very irreverently divided up into two great classes, *i.e.*, those who split and those who lump. The splitters are those who are ready, perhaps over-ready, to see in small modifications of growth or structure justification to sever this modified plant from the more typical form and give it an independent specific value. To these our plant is *S. marina*. The lumpers are those who are not ready, perhaps sometimes not sufficiently ready, to accept these modifications as having specific importance, and who therefore continue to include these variant forms in the original fold. To these our plant is the *S. rubra, var. marina.*

The *Spergularia rubra,* or field sandwort, is common enough on light gravelly and sandy soils. It is a much branched annual or biennial, forming with its spreading stems tufts of about a foot in circumference. The leaves are narrow and linear, and the small stipules at their base are scaly. The flowers vary somewhat in size and colour: this colour variation being from a pronounced pink, through paler pink, to pure white; this latter being the less common. The petals are five in number and ovate in form, and the stamens from five to ten, and somewhat conspicuous from their size and bright yellow anthers. The plant is in flower all through the summer. The seaside plant agrees in a general way with this, but its flowering time is somewhat shorter. It is a stouter plant in all its parts, is not an annual, has an almost woody root, has thick fleshy leaves, and larger flowers, and the fruit that succeeds them, a capsule, is also larger than in the field sandwort. The particular species we figure we gathered at Seaford, but it is one of the common plants almost everywhere round the coast, and those who find it will, we are sure, feel with us that its pink stars rising in profusion from the soil of the marsh make it a very attractive little plant.

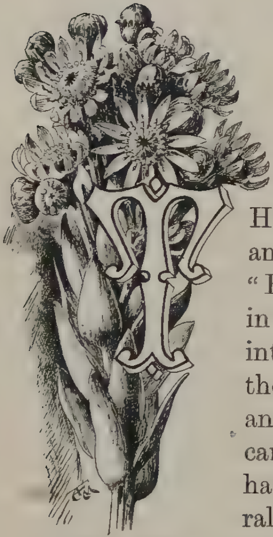
A nearly allied plant is the corn-spurry, *Spergula arvensis.* Its generic name is from the Latin, *spargo,* I scatter, in allusion to its numerous and widely dispersed seeds. The sandworts, being very similar plants, are called *Spergularia* in recognition of this likeness.



HOUSELEEK.

THE HOUSELEEK.

Sempervivum tectorum.
Nat. Ord., Crassulaceæ.

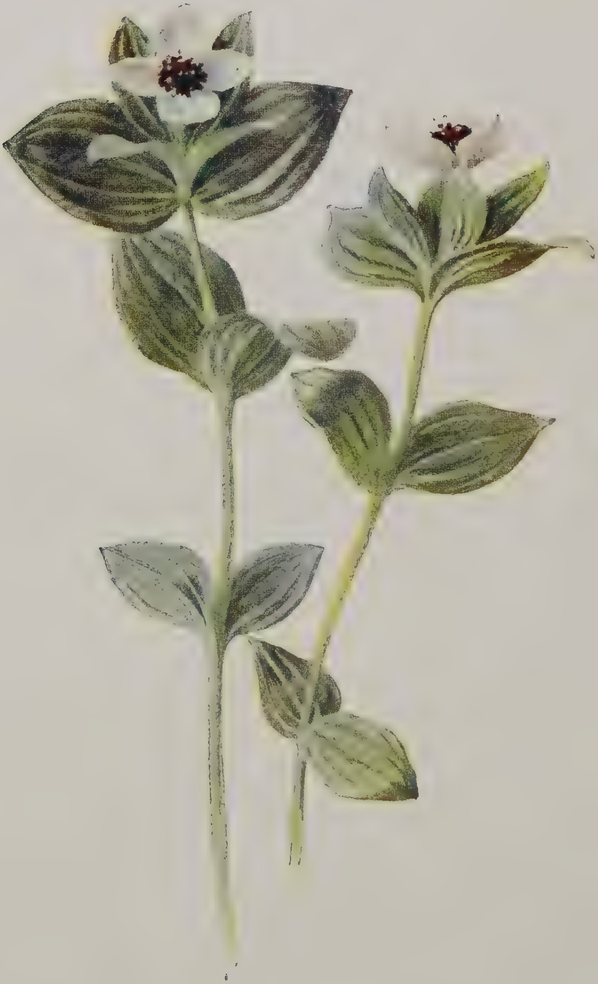


THE joint authors, Sir William Hooker and George Arnott, in their excellent "British Flora," a book that should be in the hands of all botanical students, introduce certain plants which, to use their own expression, are "branded with an asterisk." These are the plants that cannot quite claim to be indigenous, having probably or certainly been naturalised by the agency of man or of birds. The houseleek in the flora in question is thus marked. Marked appears to us the preferable word, the word branded suggesting something of stigma in some at least of its applications. The plant is found in all our text-books, but its true home would appear to be in mountainous regions in central and southern Europe; it is now so commonly found on cottage roofs and old walls that we cannot ignore its claim to our consideration. As its name is good Anglo-Saxon, houseleek being the *leac* or plant that grows on the house, its introduction in our midst may fairly be considered to be of considerable antiquity.

The generic name *Sempervivum* is derived from the Latin words, *semper*, always, and *vivo*, to live, in reference to its tenacity of life, as the thick succulent leaves enable the plant to retain its vitality during the driest season, with the minimum of soil, and having the maximum of sunshine pouring on the shelterless positions it elects to thrive in, nestling on the thatch or glowing tiles of the cottage roof. *Tectorum* means literally "of roofs," so that it will be seen that the botanical appellation of the plant is very happily descriptive. Attractive as the plant is, it was no such æsthetic reason that led to its culture, but the purely practical one of defence from evil. Many superstitions have clustered around the houseleek, and one of these was a belief in former days, references to which may be found contemporary with Charlemagne, that it afforded protection from lightning, a belief held over almost all Europe. The trace of this old belief may still exist amongst a race so conservative as our rural cottagers. Another superstition concerning it we discovered to our own cost. An old cottage neighbour of ours in a Wiltshire village had a noble tuft of this houseleek on her roof, and bearing three or four fine flowering stems. The interests of the readers of Familiar Wild Flowers being dear to us, we, without any circumlocution, asked her for a piece, but we found her very unaccountably reluctant to part with any, so we let the matter drop, and she afterwards apologetically explained that each piece cut meant a death in the cottager's family. As a neighbouring cottager had pulled away some only the year before and the old churchyard was within the year the richer by two small graves, she felt that she had abundant cause to discourage anything of like peril.

The leaves of the houseleek are found in dense tufts or rosettes. They are very thick and succulent, of a clear green in colour and having their tips often reddish. From these rises the flower-bearing stem, a foot or so in height and more or less clothed with small leaves, that diminish in size as they approach the summit. The flowers are in a cluster terminating the stem and of a somewhat fleshy pink colour. The calyx has ordinarily about twelve deeply divided and acute segments, and the corolla has usually about twelve petals, but the number of both sepals and petals is open to considerable variation. The stamens are twice the number of the petals, those opposite the petals being perfect, and the alternating ones small and antherless. The sharply lanceolate character of the petals gives the flower a star-like appearance. The plant is ordinarily found in flower during June and July. It is sometimes called the Ayegreen, in reference to its evergreen nature, and less poetically the Bullock's eye, and the Jupiter's beard, the former name from its large and widely opened corolla, and the latter from the somewhat hairy margins of the lower or rosette leaves.

The succulent leaves have been held to have a cooling and healing effect, and when cut open or bruised find a place in rustic medicine as a remedy for cuts and bruises. Such venerable practitioners as Galen, Pliny, and Dioscorides employed the plant freely in erysipelas, ophthalmia, and other disorders suggesting external treatment, and it was also used internally for various diseases, being credited with certain astringent and refrigerant qualities that gave it remedial efficacy. Gerard tells us that "the iuice of Houseleeke, Garden Nightshade, and the buds of Poplar, boiled in hog's grease, maketh the most singular Populeon that ever was used in Chirurgerie." Anyone needing a Populeon, whatever that may be, may at least give this a trial.



DWARF CORNEL.

THE DWARF CORNEL.

Cornus suecica.
Nat. Ord., Cornaceæ.

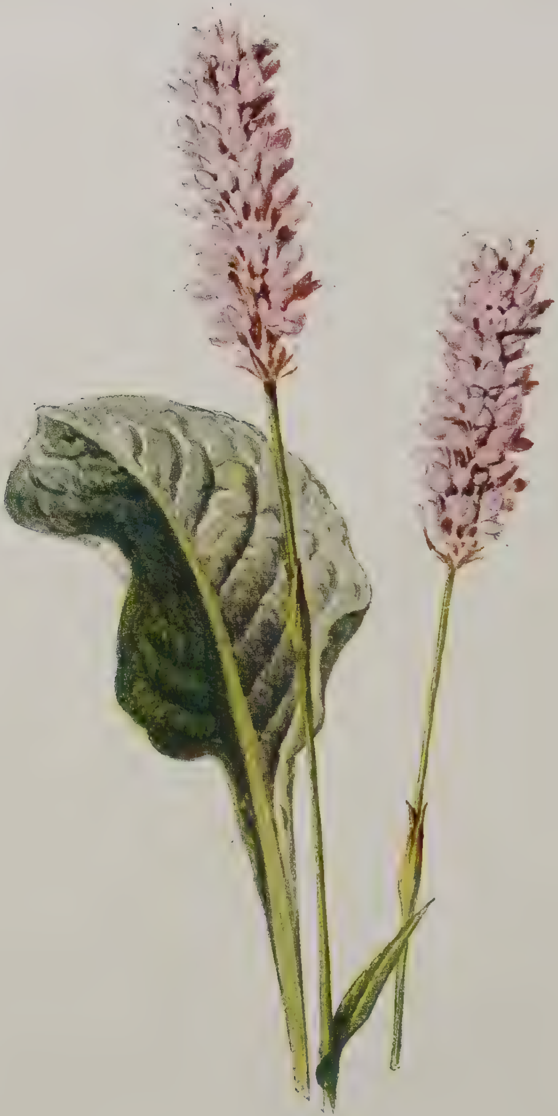
ONE of the curiously interesting things about various natural objects, such as birds, butterflies, and plants, is their marked limitation, their distinct localisation, so that an ornithologist, an entomologist, a botanist, finds his experience greatly limited if he confine himself to one district. Many of these objects of natural history are common to almost all localities in the British Isles: there are probably few parishes where the sparrow would be a *rara avis*, to be first of all shot at sight and then the murder gloried in in the columns of the local paper; but others are only to be found within very definite and circumscribed limits. The marbled-white butterfly, for example, is one of those curiously localised things that one might be years before seeing if one kept on the outside of the fence that Nature has placed as its boundary. The collection of birds' eggs of a Cromarty urchin would be in many points different from that of a young Surrey law-breaker, and a collection of dried plants made in Perth would be by no means identical with one made in Hertfordshire.

The dwarf cornel is one of the plants that would be in the Perthshire herbarium and absent from the Hertfordshire collection. It is a plant of the North, travelling round the globe, and finding a congenial home well within the Arctic Circle. Those of our readers who have wandered in Norway will probably at once recognise it, as it is a very common plant in the mountain pastures there. It is also freely to be met with in Scotland and on the higher lands of northern England. The particular specimens that supplied the material for our illustration were gathered on a wild bit of moorland in Yorkshire. The plant is not to be found at all in Ireland, a curious example again of Nature's limitations, as one would have supposed some parts of Ireland sufficiently subalpine in character to find for it suitable conditions of growth. The dwarf cornel is a perennial, and flowers ordinarily about July or August in its alpine homes, though under the more southern Yorkshire conditions it is somewhat earlier: we see by our diary that our drawing was made on June 16. If we may be allowed a slight digression of an autobiographical type, we may perhaps be permitted to say that every drawing in these volumes is our own handiwork, that we therefore take full responsibility for its accuracy, and that this accuracy has been assured by having the actual living plant before us in every single case to make our drawing from. There has been no trusting to dried plants, descriptions, or the reproduction of the work of others, either by plain larceny or with just sufficient modification to render the theft less easily detected. We need scarcely add that, under these wholesome conditions of direct association with living Nature, the work has been a constant enjoyment to us.

The dwarf cornel has a slender creeping rootstock, woody in texture, and branching. From this rise the annual stems of herbaceous character, very slightly branched occasionally, fairly erect in general direction, under ordinary conditions not more than six inches in height, having a few small scales at their bases. The leaves are in pairs, these pairs being from two or three to perhaps seven or eight in number, and it is characteristic that the leaves in each pair more or less markedly increase in size according to their position on the plant, the lower ones being the smaller. These leaves are stalkless, broadly ovate in form, having their margins what is termed entire, *i.e.*, one continuous line, unbroken by any notching or toothing, and having their surface sharply emphasised with veins, five or seven in number, running from base to apex. The flowers are in little umbellate clusters. At first sight one would naturally suppose the flower to be composed of four conspicuous petals, white in colour and having a central mass of purplish-crimson stamens, but this is not the case at all. The real flowers are very small, and it is the clustering together of these that forms the purplish mass, the four large rounded petaloid forms that surround them being an involucre of bracts. The flowers are succeeded by little clustering crimson berry-like fruits. These, when ripe, are edible: the Highlanders of Scotland and the peasantry of Norway find them acceptable, and they are also eaten by bears and other animals.

That the plant should be the dwarf cornel is an indication that somewhere or other is to be found another cornel, something a little over six inches in stature. This other is the common cornel, or dogwood, *Cornus sanguinea*, a small tree of the hedgerows and woods, and especially where the soil is on the chalk or limestone. The generic name, *Cornus*, is from the Latin *cornu*, a horn, from the hard nature of the wood, at one time in demand for spear shafts. This refers, of course, to the dogwood, the association of the idea of spears and javelins with the little six-inch herbaceous dwarf cornel being a mere absurdity. *Cornus*, as a plant name, is at least as old as Pliny: we find it in his writings.

One curious old name for the dwarf cornel is the dwarf honeysuckle. The plant has certainly no resemblance to the fragrant honeysuckle of our hedgerows, but we must remember that this name has been given to several honey-yielding flowers. Amongst these, beloved of bees, we find the meadow clover, called by divers old authors the honeysuck. The little cluster of dwarf cornel flowers was sufficiently suggestive of a minute clover-head to win for it the name that at first sight seems so meaningless.



BISTORT.

THE BISTORT.

Polygonum Bistorta.
Nat. Ord., Polygonaceæ.

THOUGH not so showy as some others of our wild flowers, our British representatives of the genus *Polygonum* are by no means wanting in grace and attractiveness. We have elsewhere figured the knot-grass, *P. aviculare*, the persicaria, *P. Persicaria*, the amphibious persicaria, *P. amphibium*, and the water pepper, *P. hydropiper*, in our series; and an inspection of the five drawings, or, better yet, a study of the plants themselves, will, we think, be held to justify us in our commendation of them to the regard of the lover of plants. Another interesting plant in the genus is the buckwheat.

The bistort should be sought for in moist meadows and by the sides of lakes, rivers, and ditches. While it appears to be very generally distributed it is distinctly a local plant, and more especially favours the north of England. It may be found in flower during June, July, August, and September.

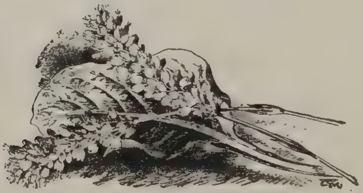
The rootstock of the bistort is large and twisted, perennial in duration, woody in texture, of a dark brown colour externally, reddish internally, and very astringent to the taste. The stems thrown up are very simple in character and erect in growth, cylindrical in section, smooth to the touch, though slightly furrowed, jointed at intervals, being at these joints somewhat swollen, and attaining to a height of about eighteen inches. Each of these stems terminates in a single dense cluster of small flowers. The flowers in this cylindrical head are supported on small stalks, having at their bases membranous bracts. The perianth is pink, or more rarely white, and made up of five segments; the stamens are eight in number, and the styles three. The stamens are considerably longer than the perianth, and give a fringed or tasselled look to the mass of flowers. The fruit is a triangular and pointed nut, shining as if varnished. This nut is enwrapped in the persistent calyx, and contains one seed. The leaves of the bistort are ovate, their edges unnotched, but considerably waved. The lower leaves, springing directly from the root, are borne on long stalks, down which for some little distance the bases of the leaves are seen to run. This feature may be clearly observed in our illustration. These lower leaves will be found from three to six inches long, while the stems bear a few small very acutely pointed leaves, having their bases sheathing the stem.

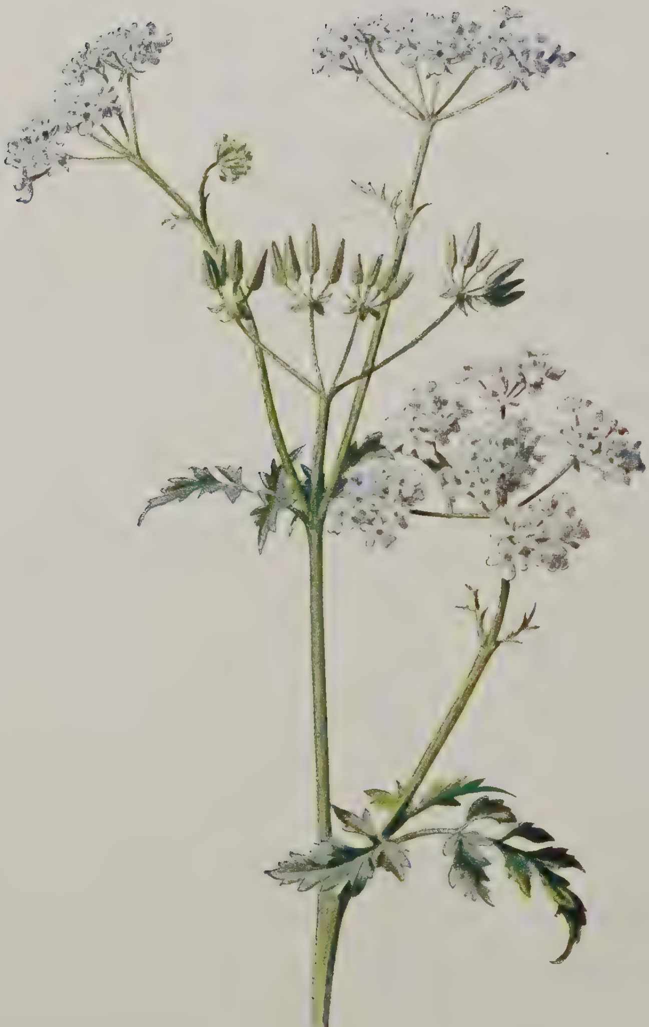
The generic name *Polygonum* is Greek in origin, being compounded of two words signifying many, and a joint or knee; a name bestowed from the numerous joints in the stems of the various plants in the genus. If we cut off the two last letters we have the more familiar word polygon, a term applied to a geometric figure having many angles. The specific name *Bistorta* is derived from the Latin words *bis* and *tortus*, twice-twisted, in allusion to the form of the roots. Hence one old name for the plant, used by Turner and other herbalists, is the Twice-writhen. The plant is so graceful and innocent-looking that it is rather a shock to find it branded with such repellent names as snake-weed, serpentary, and adder-wort, but these names all arise, like bistort, from its contorted root. It was also in old days called patience-dock and passions. It is explained that this latter name arose from the bistort being full grown by Passion Week, but its flower season at all events is considerably later. We see on reference to our notes that our drawing was made on August 28th. Passions and patience are probably each of them a corruption of some name that in its original form is now lost to us.

When the plant has once fairly taken root it propagates very fast, and forms large patches to the exclusion of the grass, so that farmers do not take quite kindly to seeing it established in their water-meadows, especially as, when it is once in possession, it is eradicated with great difficulty.

The bistort has been used in medicine until quite recently. It is one of the strongest of vegetable astringents, and has been employed in intermittent fevers as a tonic. After repeated washings the root loses this bitter astringency, and is found to contain a flour that is edible and nutritious. In Russia this is mixed with wheaten flour and made into bread.

In accordance with the old doctrine of Signatures, the belief that every plant was stamped by its Creator with a visible proof of its utility, we are not at all surprised to find that the bistort with its "writhen" root was held "good against venomous serpents," and even against the attacks of dragons. The root when powdered was taken in wine to expel the venom of the plague also, to say nothing of small-pox, measles, and other infectious diseases, and in some twenty other ways the plant, by means of its root, leaves, or flowers, was held a boon to suffering humanity.





COW CHERVIL.

THE COW CHERVIL.

Anthriscus sylvestris.
Nat. Ord., Umbelliferæ.

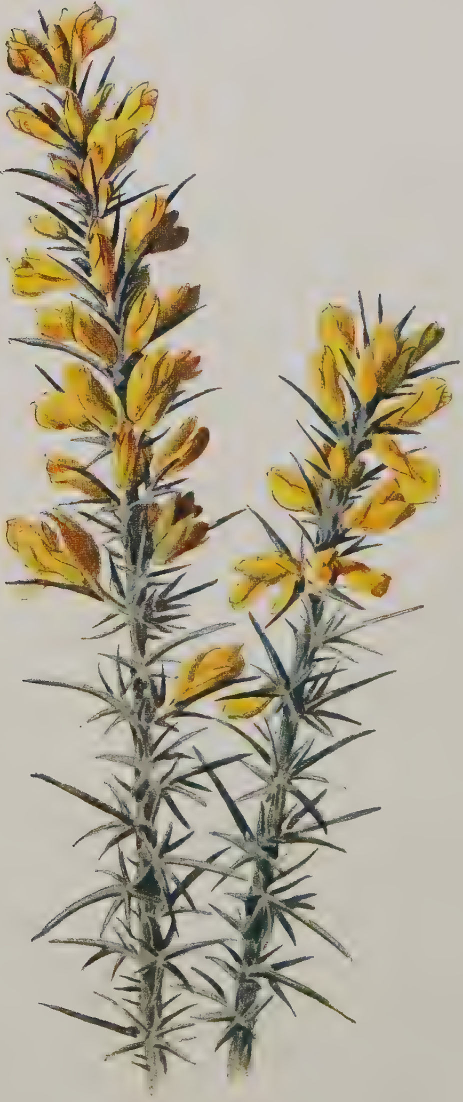
AS each year advances and spring gives place to early summer, the meadows and hedgerows are clothed in a mantle of luxuriant verdure; everything in its new-born life is at its freshest and best, and amidst these masses of herbage the pure white flower clusters of the chervil are very conspicuous. It is one of the most abundant of our umbel-bearing plants, and clothes large areas of the hedgerows, the borders of woods and copses, and our railway slopes with its delicate and graceful foliage and brilliant blossoming from about the middle of May to the end of June. It is a perennial, and though later on in the year, after its fruiting period is over, it dies down and leaves no visible trace of its presence, it is in firm possession of the ground, and rises anew as each fair summertide recurs.

While many, the greater portion, in fact, of our plants appeal to us as individuals, not a few, in addition to this, attract our notice in the mass, and give a distinct and special character, by their profusion, to the landscape. One may watch, as we have often done, on some great downland slope how the field crop of wheat, swedes, or whatever it may be, gradually loses its verdant effect, little spots of yellow appearing here and there, and gradually spreading and uniting until the whole area in a few days is transformed into a sheet of glowing yellow charlock bloom. One may see, as we have often seen, how the river, winding a dark line amidst the bright green meadows in early summer, in a few days' time becomes an almost snow-white track, this striking change resulting from the outbreak into blossom of thousands of water-buttercup flowers; and all must be familiar with the great masses of poppies that throw a robe of gleaming scarlet over the cornfield or the railway embankment, or the no less beautiful sight of hundreds of acres of common or moor one great purple sheet of heather. The cow chervil may be included in this by no means exhaustive catalogue of floral profusion, as its countless clusters of white blossom are no less to the fore than the golden charlock or the scarlet poppies.

On pulling up the cow chervil we find that it has a tap root, something like a diminutive parsnip. The stems stand boldly erect in general direction, though they branch a good deal, the plant attaining a height ordinarily of from two to three feet. The lower leaves are on long stalks, the upper ones on much shorter ones: the lower leaves, too, are much larger than the upper, and much more deeply divided up. The general character of the foliage may perhaps better be gathered from a glance at our drawing than by any attempt at verbal description. To define the character of the foliage as doubly or triply pinnate, and these segments in turn as deeply pinnatifid, would be to depart somewhat from our rule of avoiding as far as may be in these our present pages the use of technicalities; and yet in such case as this to avoid it is to lose oneself in lengthy and inadequate description. The umbels are rather numerous on each plant, the result of the freely branching habit. Not very large in size, as compared with those of the water dropwort, hemlock, and many others of our umbelliferous plants, they generally have from eight to ten rays, and they have a curious habit of at first slightly drooping. This character may be observed in our illustration, which, without this explanation, rather suggests the idea, both from the drooping flower-heads and curled-back leaves, that we had drawn it from a plant that had already begun to fade before we delineated it. The two points we have particularised are natural to the plant and are not by any means symptoms of decay. It will be noted that at the point where the rays of the main umbel are given off no bracts are to be seen, but that in the smaller umbels that crown each of these rays the radiant point is marked by small bracts. The fruit is elongated in character, very smooth and polished-looking, and without the ribbing that is so marked a feature of the fruits of almost all the other British species in this great natural order. The absence of the general involucre, or bract ring, and the presence of the partial involucre at the bases of the two sets of radiating umbel-stems, is still more clearly marked and visible in our fruit-head than in the flower-heads.

Why the cow chervil should be called *Anthriscus* does not at all appear. The name was bestowed on this or some allied plant by Pliny, and no clue to its derivation or meaning is forthcoming. By some writers the plant has been classed as a *Chærophyllum;* the distinction turns on a minute point of fruit-structure. Our English name chervil is a corruption of this word *Chærophyllum*, a word derived from the Greek, to rejoice, and a leaf, one of the species having leaves of a very agreeable smell and medicinal value. Our Anglo-Saxon forefathers knew our plant as the *Cœrfille,* and a rather picturesque old name for it in some parts of the country was the hare's parsley.

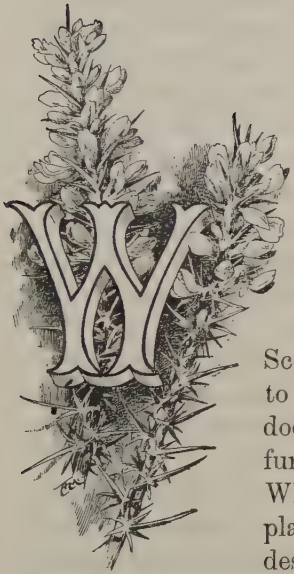
Like most other things, the cow chervil was held medicinal, and it was also used as a pot-herb, while Gerard, we see, declares that "it is used very much among the Dutch people in a kinde of Loblolly or hotch-pot which they do eate, called Warmus." As there is a strong family likeness in many of these umbel-bearing plants, and some of them are acutely poisonous, it would be well to be quite sure of the raw material of one's Warmus before committing one-self to it.



DWARF FURZE.

THE DWARF FURZE.

Ulex nanus.
Nat. Ord., Leguminosæ.



WE have in another volume figured and described the common furze that grows so abundantly throughout England, though it is rare in Scotland; and it may be a new idea to some of our readers that this does not exhaust the possibilities of furze-talk and furze-representation. While, however, the dwarf furze, the plant we now figure, finds a place in descriptions and lists of our British plants, it is only right to say that it is ordinarily enrolled in this goodly company somewhat apologetically, with a little uneasy suspicion in some cases as to whether it has fully justified its claim to be considered a distinct species, or whether after all it be not a well-defined variety of the common furze, *Ulex Europæus,* that clothes our sandy commons with its evergreen foliage and its mantle of brilliant yellow blossom. Those, however, who are really familiar with the appearance of the two plants will, we think, be inclined to agree with those who recognise its claim to an individuality of its own, and with all good conscience we proceed to deal with it on that footing.

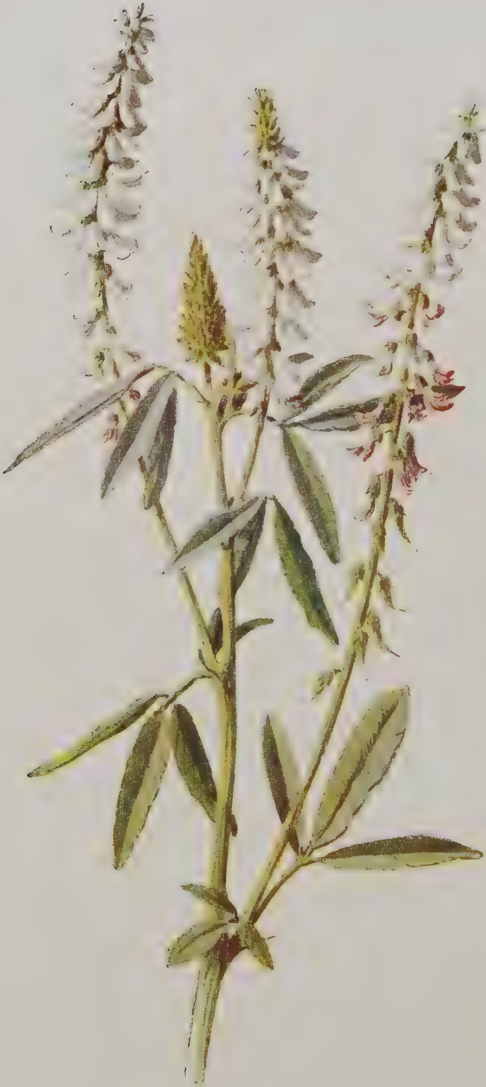
The dwarf furze, like the common furze, is a plant of the dry, gravelly, or sandy heathlands, and though not absolutely so common as the latter, is widely distributed over England and Ireland, and right away to the Orkney Islands, though it is less commonly to be found in Scotland than in England. It is, naturally, often overlooked, not only on account of its smaller size, but because many who glance casually around them and know nothing of a second species would think that it was but a smaller plant of the common furze covering acres of the common land spread out before them.

Greater or smaller bulk is a point in itself of very little value, but when we find it in constant association with other points it becomes one feature the more to take into consideration.

The dwarf furze is smaller in all its parts, stems, flowers, spines, and so forth, than the common species. It is also less hairy, and of a deeper green colour. The flowers, too, are of a stronger yellow. It is a perennial. The calyx is in the common furze clothed with hairs, and in the dwarf furze it is either quite smooth or only having a few short and scattered hairs on its surface. The calyx is nearly as long as the corolla, twice-cleft, the upper segment slightly two-toothed, and the lower three-toothed; at its base on either side a minute rounded bract. These scarcely perceptible bracts form one of the characteristics relied upon as of specific value, as the bracts of the common furze are much more developed. The corolla is of the well-known pea-flower type that we see in the broom, rest-harrow, bird's foot trefoil, melilot, clover, and other species in this great natural order and which we find again in our gardens in the wistaria, lupin, robinia, laburnum, and many other attractive plants. The flowers in the dwarf furze are arranged in a more regular spicate manner than in the common furze; in the former the flowers appear in a rather lengthy column, while in the latter the clusters are somewhat more rounded in mass-effect. The two species flower also at rather different times, for though it be an old tradition that "when the furze is out of flower, kissing is out of season," the point of the remark being that it is thought that furze may always be found more or less in blossom, yet as a matter of fact the real flowering season of the common furze is from early spring to the middle of summer, while the dwarf furze scarcely appears in flower until July, and then goes well through the autumn onwards to October or even November. The times we have given are those when the flowers are in full profusion, what one may term the real flowering season, but each species has a way of throwing out occasional blossoms at other times. Speaking broadly, we may say that when the common furze is covered with pods the dwarf furze is covered with flowers. The pods of the common open and shed their seeds the same year they ripen; the pods of the dwarf furze ordinarily remain closed till the following year.

The stem of the dwarf furze is woody, and from two to three feet high, though occasionally it is procumbent, scarcely showing above the surrounding herbage. As this procumbent plant differs also in some ways from what has been accepted as the type form, it has been proposed to make this into a distinct variety or even a distinct species, under the name of *Ulex Gallii;* but these two forms, though in their extremes distinct, have too complete a sequence of intermediate forms to seem at all to warrant this.

The dwarf furze is too widely distributed to make it really necessary to give any localities for it, but we may perhaps mention that the particular pieces figured we gathered in Epping Forest, since that is a district easily accessible to a large number of people. Those who know the Forest know its charm, and those who have only thought of it as a haunt of Cockney excursionists, and therefore avoided it, will find that they can wander for hours amidst its woodland solitudes without seeing a human being, and find ever fresh interest and beauty on every side. The timid deer will gaze at them and retreat into the undergrowth, the jay will chatter noisily at their intrusion, and if they be unarmed with map and compass they may get as certainly lost for the time being as in the backwoods of America or in the Australian primeval forest.



WHITE MELILOT.

THE WHITE MELILOT.

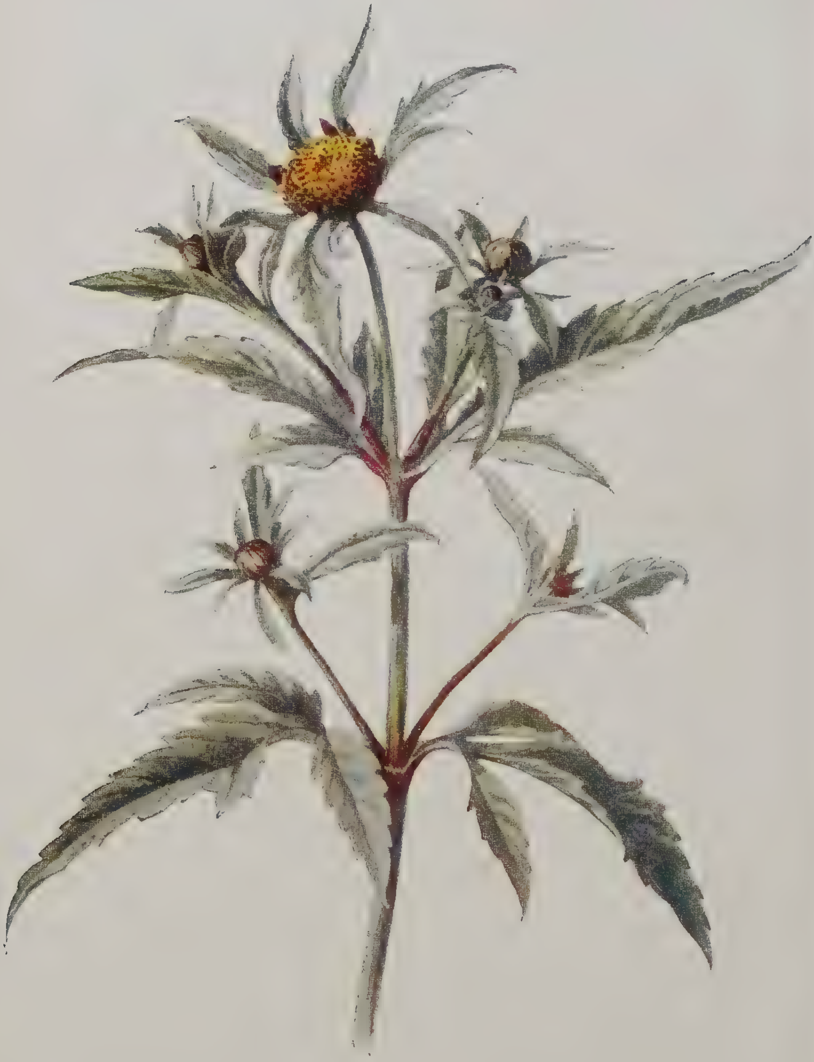
Melilotus vulgaris.
Nat. Ord., Leguminosæ.

THE white melilot is a near relative of the yellow melilot, a plant that appears elsewhere in these volumes, and though this latter has been more particularly distinguished as the common melilot, there is really very little to choose between the two species on the score of relative abundance. In some parts of the country one finds one to be more in evidence and in others the other, but both are quite common enough to claim a place by right in our pages. There would appear, however, to be this difference between them, that while the yellow-flowered melilot may be accepted as an indigenous species, the present plant, the white-flowering melilot, has more probably been introduced; but if so, it has accepted the position very kindly, and is entirely naturalised in our midst. It is a particularly common plant in Central and South Europe, and in the fields and vineyards is regarded as a pest and a nuisance. It is found in various districts throughout England, Ireland, and Scotland, having probably in the first place been introduced involuntarily by the agency of corn or ballast. It is a perennial, and flowers under normal conditions in July, August, and September.

The growth of the white melilot is in general direction aspiring, and while the plant branches very freely, all these lateral stems, as our drawing indicates, partake of this upright character. The plant attains ordinarily to a height of some four feet, though we may at times find it nearer five. The leaves are composed of three leaflets, narrow and toothed, the lower ones on the plant being generally broader in proportion to their length than the upper. The flowers are very numerous, white in colour, and in long racemes that spring from the axils of the upper leaves. The individual blossoms are small, and of the pea-like form characteristic of the order in which the plant is placed, and which we see in the furze, dyer's greenweed, broom, black medick, hare's foot, bird's-foot trefoil, kidney vetch, sainfoin, tufted vetch, tuberous pea, and divers other plants figured in our pages. As the flowers die they turn brown, the petals then fall away, and the pod or legume appears. The legume is as characteristic a feature of the order as the pea-like flower; hence all these plants are classed together as leguminous.

The popular name of the plant, the melilot, is clearly derived from its botanical title, *Melilotus*, but why this name has been applied to the genus is not very obvious. It is derived from *mel*, the Latin word for honey, and *lotus*. The plant is not very noticeably honey-bearing. We have another genus that bears the name lotus, of which the *Lotus corniculatus*, or bird's-foot trefoil, is a well-known example. The ancient botanical writers appear to have used the name for three entirely different plants: the tree lotus, which we now identify as the *Ziziphus lotus;* the beautiful waterlily of the Nile, the sacred flower of Egypt, *Nymphæa lotus;* and the Indian bean, the *Nelumbium speciosum.* The name is used botanically by Dioscorides, Theophrastus, and other early writers, but whatever plant they may have had in their thoughts in writing their descriptions, we may at all events feel tolerably certain it was not the bird's-foot trefoil or the melilot, white or yellow; nor, its prefix notwithstanding, does our melilot agree with the *meliton* of Pliny. Our plant is sometimes called the melilot trefoil, a somewhat cumbrous name. The tender foliage makes the plant acceptable, horses and other animals relish it, and it may be assumed, with a little touch of poetry in the idea, that the wild deer find it equally agreeable as they browse on it: hence another old name for it is the hart's clover. The older writers troubled little about possibilities or probabilities in such matters; they preferred something more definite than that. Turner, for example, writing between three and four hundred years ago, admits no theorising on the point, but roundly asserts that the plant is called hart's clover "because deer delight to feed on it."

Another old name for the plant is plaister-clover. We are here, of course, getting on medical ground. Galen, court physician to the Emperor Marcus Aurelius, used to prescribe melilot plaister to his Imperial and aristocratic patients when they were suffering from any inflammatory tumours or swelled joints, and the plant is so used even to the present day in some parts of the Continent, and possibly in England. In one Continental pharmacopœia of recent date an emollient application is directed to be made of melilot, resin, wax, and olive oil. Whether the ancient physician and the modern one use the same plant is a very delicate point to raise. Gerard declares that "Melilote boiled in sweet wine vntile it be soft, if you adde thereto the yolke of a rosted egge, the meale of Lineseed, the roots of Marsh Mallowes and hogs greace stamped together, and vsed as a pultis or cataplasma, plaisterwise, doth asswge and soften all manner of swellings," while another of his receipts that we need not give at length, but in which this herb is a constituent, is also of "most soveraigne healing." It was believed that the juice of the plant "dropped into the eies cleereth the sight."



TRIFID BUR-MARIGOLD

THE TRIFID BUR-MARIGOLD.

Bidens tripartita.
Nat. Ord., Compositæ.

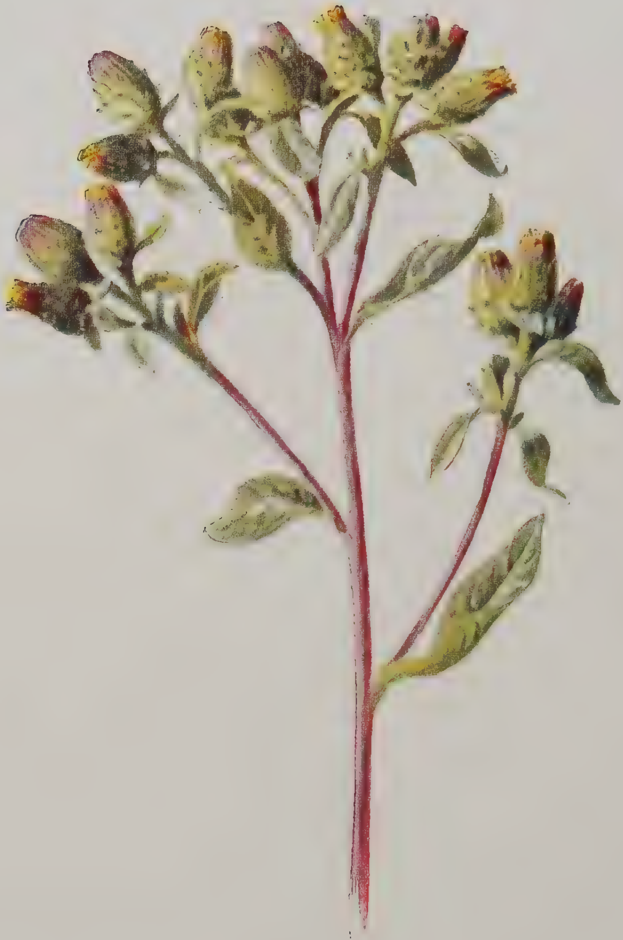
WHILE wanting the beauty and grace of many of our river or riverside plants, the trifid bur-marigold has a certain quaintness of form and a harmony of quiet colouring that makes it by no means unwelcome to those interested in our flora, though these features do not thrust themselves conspicuously forward and compel attention. The ordinary tourist, to put the matter another way, would, if he had fair gift of observation, scarcely fail to note and appreciate the chalices of the white water-lily resting on the surface of the placid stream, would scarcely fail to be attracted by the golden blossoms of the water flags that fringed its borders, while the bur-marigold, abundant as it might be, would almost certainly go unrecognised, unseen.

Enthusiasm for plant collecting and for plant study (which is not quite the same thing always) will carry one a long way, but when our quest is turned towards these dwellers in the marsh lands such enthusiasm is greatly aided by a matter so prosaic as a good pair of wading boots. We can well recall the fine and wholesome scorn that fell on a student in a large engineering college when he appeared in the workshops in a pair of gloves that were intended to keep his hands white and free from grease, rust, and the grime of actual work; and the man who cannot cut himself adrift from the boot-black and run the risk of carrying off some few pounds of soil on his boots will never penetrate very far into the delights of fen-land.

These remarks, however, are more of general than of particular application, as though the bur-marigold is a lover of moist ground, it may often be found by the sides of our rivers and lakes under conditions that do not impose any great hindrance to its investigation. It is an annual, and may be found in flower during July, August, and September.

The trifid bur-marigold is a somewhat stout, spreading plant, branching a good deal, yet erect in general direction, and attaining a height of one to two feet, or perhaps even a little more under exceptionally favourable conditions. The whole plant is smooth to the touch, and free from any hairy clothing on stem or leaf. The leaves are deeply cut into three lanceolate and strongly serrated segments, or more occasionally into five. These leaves are, as we see in our illustration, always in pairs on the stem. The leafy involucre that surrounds the flower heads is a very conspicuous feature: it is composed of two or three rows of bracts, the outer ones being extended far beyond the flower-heads and very foliaceous in character. The flower heads are ordinarily somewhat pendent, more especially so during the expansion of the florets. While the florets themselves are a rather strong orange-yellow in colour, the enclosing bracts are often of a deep dull crimson, a colour that we find again very frequently on the stems, the unexpanded flower heads, and the margins of the leaflets, thus giving a pleasing richness and variety of colour to the plant.

As the name of our plant dwells emphatically on the fact that it is the trifid bur-marigold, the idea naturally suggests itself to us that somewhere or other there is another bur-marigold that is not trifid, and the facts fully bear out the supposition. The *Bidens* genus is a very extensive one, diffused over almost the whole world, and equally at home in the snowy north, within the Arctic Circle, and amidst the dense vegetation of the tropics; but in England it is represented by but two species, the present one and the *Bidens cernua*, popularly and distinctively known as the nodding bur-marigold. This is a very similar looking plant to the subject of our illustration, the main points of difference being that the flower heads are somewhat larger, and that they have a much more decided droop, hence the "nodding" in the name of the plant; and the leaves are not made up of three leaflets, but are of lanceolate form. The nodding bur-marigold, which will be found in our eighth series, is, perhaps, slightly the more commonly distributed of the two, and we have seen it growing freely enough on a swampy common that can be reached from Charing Cross for a return ticket that costs less than a shilling. In a botanical examination paper we once put the question, "Give details of the structure of the flower in the following common plants: mallow, sowthistle, and woody nightshade," and got the following reply from one of the candidates: "Being a London student I have no knowledge of these common plants." In those days any of these three could be found within a mile of South Kensington, where the examination was held; hence our choice of them. On the aforesaid swampy common we one day gathered over fifty specimens of flowering plants, so that even the London student may find much pleasant material for study very close at hand.



PLOUGHMAN'S SPIKENARD.

THE PLOUGHMAN'S SPIKENARD.

Inula Conyza.
Nat. Ord., Compositæ.

THE plant we have here represented, the ploughman's spikenard, is frequent enough in England in the hedgerows, in open clearings in the woods, and by the roadside, but curiously enough it stops pretty accurately at the dividing line between the Southern and Northern Britains, and makes no appearance in Scotland; nor does any record seem to exist of its having been found in Ireland. It appears especially to favour localities on the chalk, or where the surface soil is a stiff clay, and flowers somewhat late in the floral season, say, under normal conditions, from about August to October.

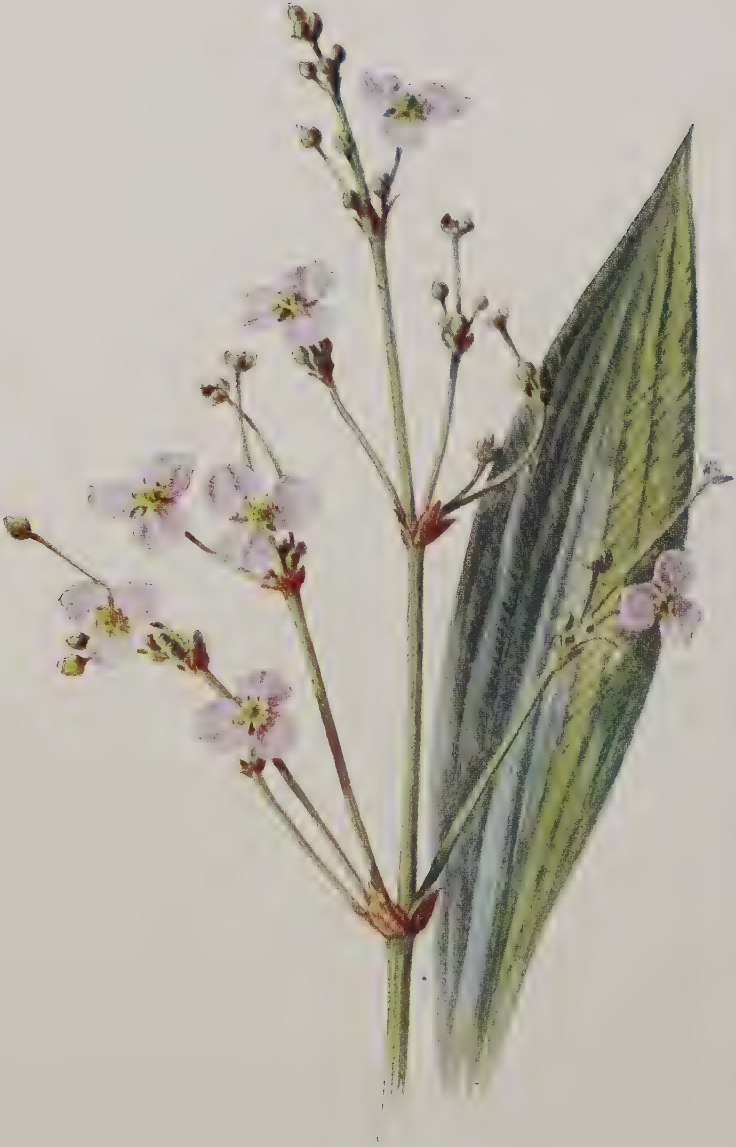
The ploughman's spikenard has a vigorous upward growth, throwing up an erect, tough stem that may be anything from a few inches to a yard in height. This main stem throws off lateral branches fairly freely, and these in turn partake of the general upward direction of the plant. The leaves vary considerably in their character according to their position on the plant, the lower ones being much larger than the upper, borne upon footstalks, and having their margins serrated, while the upper ones, though partaking of the same general lancehead form, grow ever smaller and smaller as they near the summit, spring directly from the stems without the intervention of any petiole, and have their margins one continuous line. Both stem and leaves are more or less covered with a short down. The scales that form the involucre are thin and narrow, what is termed technically linear, and have a way of turning outwards. As they are of varying lengths this recurving of their extremities has a rather curious effect. These scales or bracts are very numerous, necessarily so, as they are individually so narrow, and while the lower ones remain green throughout their length, the upper ones, erect in growth, are reddish in colour. The involucral mass as a whole is ovoid in form, or we might almost describe it as barrel-like. Rising to a short distance above this we see the small and inconspicuous flowers, the florets of the ray being scarcely larger than those of the central disc, and the general effect on casual observation suggesting to us that we are looking rather at buds than fully expanded flowers. These flower-heads are numerous, thickly clustered together at the extremities of the upper lateral branches, and giving the effect of a goodly terminal mass of inflorescence.

The generic name, *Inula,* is said to be a corruption of *Helenium,* this plant, or more probably some other plant, or quite possibly no plant at all, having been believed by the ancients to have sprung from the bitter tears of Helen, the heroine and fatal cause of the Trojan War. The name is used by Horace in reference to some plant or other, but we can hardly imagine that a lowly and inconspicuous herb such as this would have received a name so distinguished. Even the allied plant, the *I. Helenium*, the elecampane, though it bears, as we see, in both its generic and specific names a reference to the legend, is scarcely of sufficient distinction or charm to justify us in believing that it could really have been produced from a source so pathetic. When we travel on to the specific name, *Conyza*, the descent from poetry to very plain prose is very rapid. This word, once used as the generic name, is Greek in origin, and is found in the writings of Hippocrates: it signifies dust, the powdered plant being sprinkled about to kill fleas. Our plant was the *Conyza squarrosa* of Linnæus, and was by our ancestors known as the flea-wort. In less cleanly and sanitary times such plants seem to have been held in considerable esteem, and this is by no means the only one that was sought for as a pulicide.

Spikenard was held in great repute amongst the ancients for its fragrance. In the Song of Solomon we read of "spikenard and saffron, calamus, and cinnamon, with all trees of frankincense" as the goodly spices; and the woman's costly offering and sacrifice to her Lord, of which the memorial was to last for ever, was "ointment of spikenard very precious." This was prepared from the root of a plant that grew at great heights on the Himalayas, and the expense of gathering, and of transport from

India to Judæa, necessarily made it a very costly preparation. The comment of the bystanders, that it might have been sold for three hundred pence, fails to convey its full meaning to us until we recall that this amount was the equivalent of a little over ten pounds of our present money.

The root of our English plant is of strong and pleasant odour. The idea, therefore, of those who gave it its popular name was that, as the root of the Asiatic plant yielded to the wealthy a choice and rare perfume, so our lowly English plant was in its degree the giver of pleasant fragrance, and not to the wealthy and luxurious alone, but to all, no matter how lowly, who cared to accept Nature's gift. It is by some old writers called clown's-nard, a name that is on a par with such plant-names as poor-man's weather-glass, or clown's wound-wort, or carpenter's herb, names that are an assertion that the plants of the field are for the service of all, and that the poverty of the poor does not debar them from the enjoyment of all benefit or helpfulness that springs from them. Another old name for the plant is the cinnamon root. Its medicinal properties were, in the estimation of our forefathers, numerous and potent.



WATER PLANTAIN.

THE WATER PLANTAIN.

Alisma Plantago.
Nat. Ord., Alismaceæ.

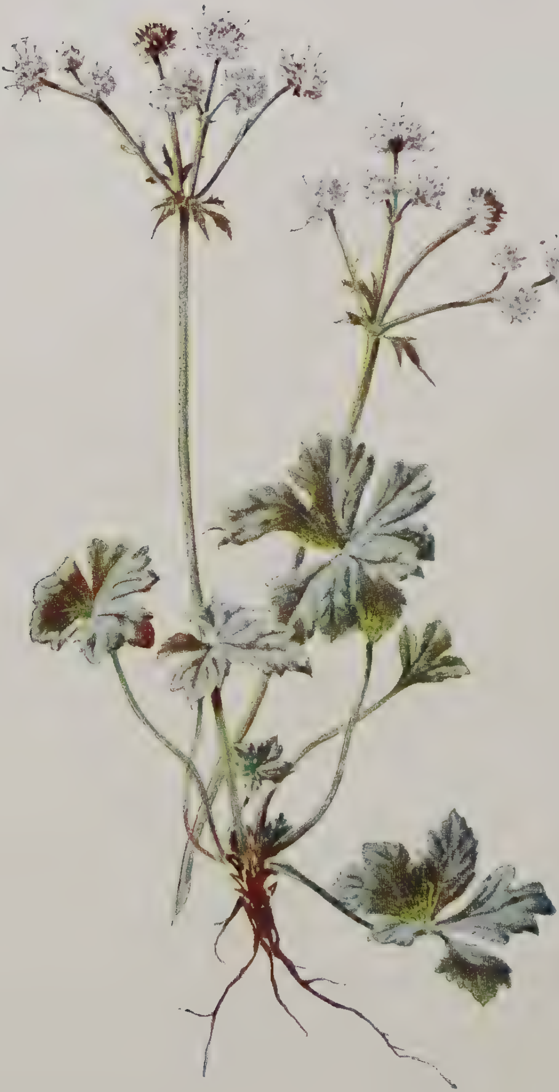
WHILE it is a recognised fact that tastes differ, that what is one man's meat is another man's poison, that what is especially attractive to one person is repellent to another, one can after all generally find a more or less distinct trend of opinion, the voice or feeling of the majority. We shall, we think, while not hoping for unanimity, carry with us the feeling of most when we declare that amongst the various groupings of plants according to the localities in which they are to be found, the water plants may claim high rank, if not the first place, for their beauty and interest. The marsh plants include the buckbean, the bog-pimpernel, the ivy-leaved campanula, and many another charming flower, while the cornfield has conspicuously in its midst the scarlet, blue, and gold of the poppy, the bluebottle, and the marigold. The moorlands again have, besides the great masses of purple heather and golden furze, a special and beautiful flora of their own, and in like manner the forest, the hedgerow, and even the bleak and windswept shore, all have their characteristic blossoms, all repaying study, all awakening interest. In an especial degree we nevertheless hold to our opinion that the flora of the stream and its banks is pre-eminent in charm. We have on the surface of the water the silver or golden blossoms of the white and yellow water-lilies, the former being one of the stateliest of all our wild flowers, the pink blossoms of the persicaria, or, may be, the pure white flowers of the water buttercup. Around the margin of the lake or by the edge of the stream we find the azure forget-me-not, the brooklime of yet deeper blue, the willow herb, the flowering rush, the beautiful arrowhead, the yellow iris, and, with these, the water plantain, the subject of our present illustration. A right goodly company!

The root of the water plantain is perennial and somewhat bulbous, and furnished with a tuft of numerous whitish fibres. The flower-stalk is obtusely three-cornered, a form especially suitable to give it strength to stand against the current; it is from one to three feet in height. The flower-bearing branches that spring laterally from this at its upper extremity are thrown off in rings, or whorls, and these branches are themselves branched in like fashion. The lower primary branches are ordinarily much larger and thrown off at a greater angle from the central stem than the upper. The number of radiating branches in a whorl varies considerably, and they are often of very unequal lengths. At the base of each offset will be found some membranous stipules, more or less withered, and enwrapping the stem. The leaves all spring directly from the root and are borne upon long stalks. They are ovate in form, acutely pointed, smooth in texture, growing in a nearly erect position, having their margins often more or less waved, and very strongly veined, the mid-rib and about three on each side being specially conspicuous. These are what are termed parallel, though the term is used in a more elastic sense than the student of geometry would recognise. The leaf stems are deeply channelled, broadening out and sheathing at their bases. The leaves vary a good deal in their proportion of width to length.

The flowers, as our illustration indicates, are very pleasing in form and colour. The calyx is composed of three ovate, concave, spreading sepals, while the corolla is of three petals. These are somewhat round in form, slightly jagged at their edges, and of a delicate rose-purple colour. The stamens are six in number, their anthers being of a greenish tint. The fruit is composed of some twenty or more three-cornered, clustering carpels, each containing one seed.

The name *Alisma* is said to be from the Celtic word for water, *alis*, in allusion to the aquatic habitat of the plant, while *Plantago* is the Latin word for the plantain. The early botanists were impressed with the similarity of form between the leaves of the present plant and those of the plantain, and, ignoring all reference to flower or fruit, or any other feature, called it the water plantain, *Plantago aquatica;* but the two plants have really no affinity.

The water plantain may be found in watery ditches and on the margins of rivers and ponds, and is abundant almost everywhere under those conditions. It is found throughout Northern Europe, Northern Asia, Northern America, and, curiously enough, reappears in Australia. We have two other species of *Alisma*, one of them, the *A. ranunculoides*, fairly common; the other, the *A. natans*, very local, being found in the north and west of England chiefly, and more freely in the west of Ireland. All the species are aquatic.



WOOD SANICLE.

THE WOOD SANICLE.

Sanicula Europæa.
Nat. Ord., Umbelliferæ.

THE woodland blossoms are not very showy, though, like the woodsorrel and divers others, including the present plant, they are by no means lacking in modest attractiveness, and we could easily imagine a designer passing by many a more conspicuous species and deciding that the spandrel he would carve in his cathedral should be based on the beautiful foliage of the wood sanicle; the missal-painter seeking in it inspiration for his borderings, and the printer a pattern for some light fabric; and the manufacturer of damask, or lace, or muslin finding in the blossoms and leaves of this woodland plant the graceful delicacy and richness of form that he sought. Flaunting sunflowers, straggling tulips, may have their day elsewhere; there still remains a welcome for the simple beauty of many a lowlier form in the skilled hands of the appreciative designer.

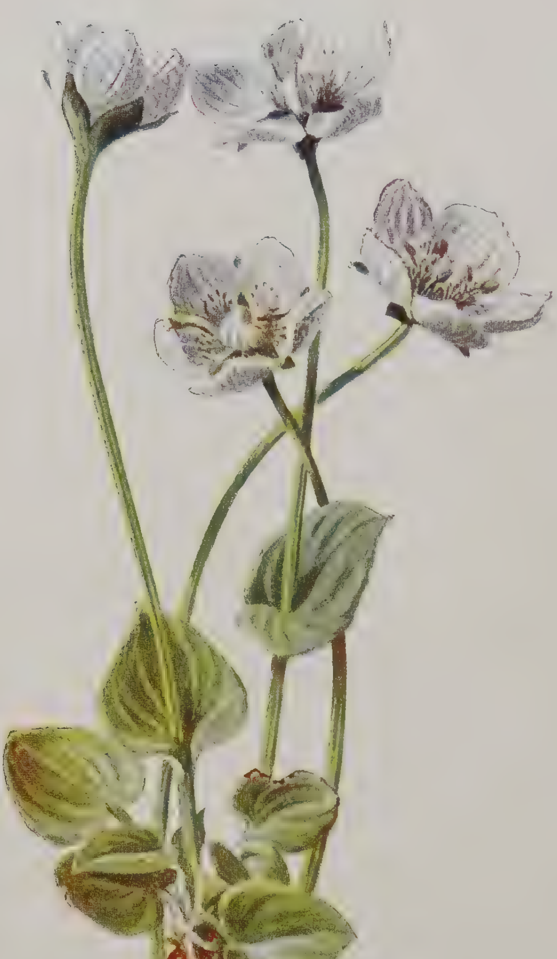
The sanicle is very commonly to be met with throughout Britain if we seek for it in the localities adapted to it, in woods, copses, and thickets. It is under similar conditions to be encountered throughout Europe, and right away into the temperate parts of Asia, in each continent avoiding the extremes of cold or heat. It is a perennial, and should be sought for in flower during the months of June and July, though we need scarcely point out that in thus placing a limit to its flowering season, or the flowering seasons of any plant in our series, exceptional seasons or exceptional positions may modify what we may consider a fair average duration of blossoming, and thus make the dates we give too late for the commencement or too early for the finishing of the floral season. If not too colloquial, we would desire that each date we give should be understood—uttered not, yet comprehended—as ending with the formula "there or thereabouts." Our illustration, we see by our diary, was made on June 29th, the plants being Yorkshire grown.

The root-stock of the wood sanicle is somewhat short, as our illustration indicates, and is almost woody in its texture. The leaves spring almost entirely from the root, only a few small leaves in addition being found at the springing of the inflorescence. These smaller bracteate leaves are ordinarily three-cleft and serrate. The radical leaves are much larger, borne on long stalks, and from one and a half to two inches across. They are very deeply cut up into radiating lobes, ordinarily five in number, though we may sometimes find seven, and these lobes are frequently in turn three-cleft or deeply serrated; they are often finely fringed with hair, the rest of the plant being what is botanically termed glabrous—smooth, hairless.

The stem may be anything in height from a few inches to about a foot and a half, or even two feet, circular in section, and not branching until approaching the inflorescence.

In the terminal clustering of flowers we ordinarily find two or three short stems, each supporting a single small head of flowers, and possibly two or three others bearing two or three small heads, but the proportion in the groups between the single heads and the three-headed stems is variable. In the particular specimens from which our illustration was made we see that there are two of each type in each bunch. This, as it stands, suggests a little more rigidity of arrangement than is often to be encountered. The flower clusters are small, and white in colour. Some-one may, perhaps, be inclined to cavil that white is not a colour at all—that it is the absence of colour. This may be perfectly true in most cases — ribbons, for instance, may be either white, or black, or coloured, but in botanical parlance everything that is not green is coloured, and so a white flower is a coloured one, ribbons notwithstanding. The individual flowers are very small, and some of them, on close scrutiny, may be found to be abortive, the fertile flowers being stemless, and the sterile ones on short stems. The minute petals, five in number, inserted in the little disc that crowns the ovary, have the inflexed point so characteristic of the flowers of the *Umbelliferæ.* The fruit is ovate, very densely covered with hooked prickles, and almost round in cross section, not a common feature in the fruits of the order. During the actual flowering period the petals are almost hidden by the leafy, prominent teeth of the calyx, but all these floral arrangements are on a very small scale, and require considerable scrutiny and the aid of a glass.

The generic name, *Sanicula,* is derived, some will tell us, from the Latin verb *sano,* in reference to the reported healing qualities of the plant, while others scoff at this and say the name is German in its origin, and refers to St. Nicholas, called in Germany *St. Nickel.* According to the legend, a wicked innkeeper had killed two children. St. Nickel, coming that way, found the remains in pickle in a pork tub, and, interceding with Heaven, obtained the restoration of the children to life. It was an old saying that "he who keeps sanicle laughs at the doctor," and it was very natural that a plant so healing should be dedicated to a saint so potent as a healer.



GRASS OF PARNASSUS.

THE
GRASS OF PARNASSUS.

Parnassia palustris.
Nat. Ord., Droseraceæ.

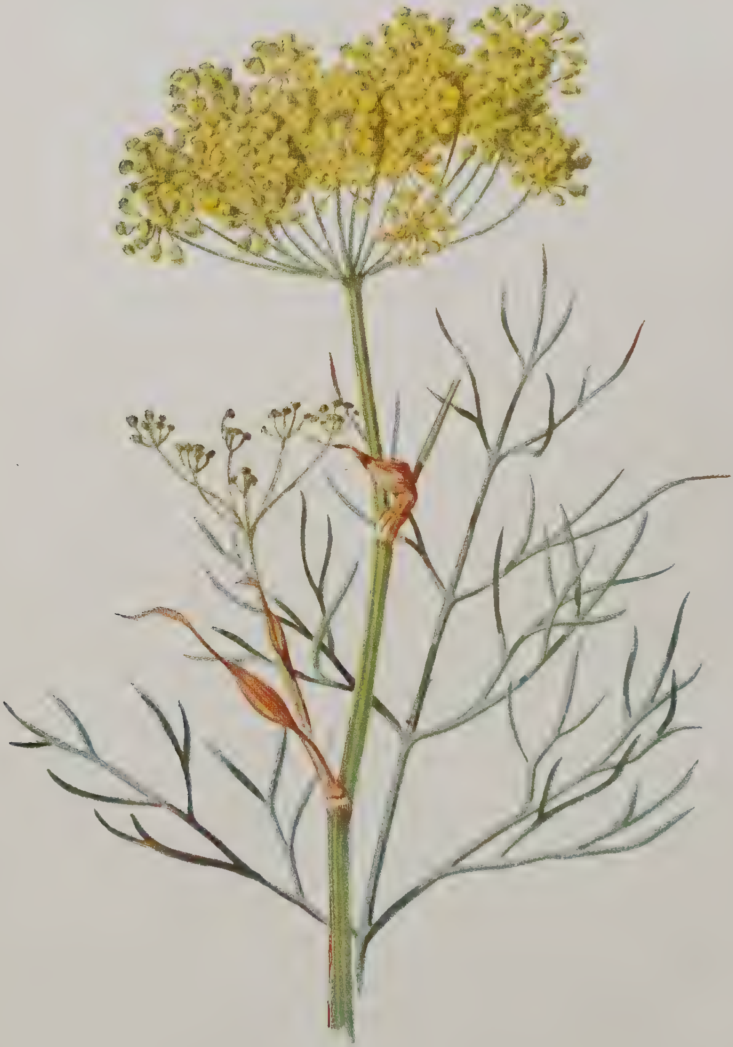
WHEN we were one day showing a friend round our garden we presently came to a goodly clump of grass of Parnassus, the subject of our present illustration, the theme of our present essay. "Why," he cried with delight, when he caught sight of it, "that is the thing I have seen everywhere; it recalls some of the happiest days of my life: I have seen it growing by the glaciers in the Bernese Oberland, in the grandest gorges of the Tyrol, by the roaring cataracts of Norway, in the——"; but we need not further detail his enthusiastic welcome. He was charmed to be formally introduced. Doubtless his previous pleasure in it has been shared by many of our travelled readers; a section which we may estimate in these wonderful days of facility of locomotion as about ninety-nine per cent.

It is a by no means difficult plant to grow; the only and very natural stipulation that it makes is that the conditions of its wild life should be as far as possible observed. This, of course, is in all cases an essential condition. If we get our cultural notes mixed up, and endeavour to grow a water-lily on the tiles of a cottage roof, or a patch of house-leek in the centre of our pool, a failure is inevitable. Nature is at all points inexorable, in the least as in the greatest. Our *Parnassia* will not insist on the clear mountain air, the breeze of the snow-fields, the splash and foam of the thunderous waterfall, the ozone of the Scottish moorland, though it will presently pine and wither for the lack of these; but we may have it with us in prospering health for a long period if only we recall how we found it in that marshy patch on the mountain side, and at once proceed to manufacture a little counterfeit plot of peaty water-logged bog. This, when we have compassed it, will be a welcome home for our osmundas, buckbeans, bog-pimpernels, ivy-leaved campanulas, all plants reminiscent of those happy days when we have come home wet through as to our nether extremities, and with some few pounds of moorland mud adherent to our boots.

The grass of Parnassus will travel well if dug up carefully and put in a tin canister, the rest of the tin being filled in lightly with damp moss. A profusion of this will be at hand, and its presence in the box gives the needful humidity, and also prevents the plant being bruised, as it would possibly be if in an otherwise empty box, flung on to the steamer's deck, and thrown in and out of the mail-van. Those to whom the miniature bog presents difficulties may for a whole season grow our plant to admiration, if only, having planted it in a flower-pot, they will stand that pot in a deep saucer, see that the earth in the pot is kept fairly moist, and that the saucer is kept full of water. One may thus get even on one's window-sill in Clapham or Bayswater the concentrated essence of pleasant travel-memory, a delightful whiff of Zermatt, a happy thought of Nærodal, as the rattle of the street traffic dies for a while out of our ears, and we hear once again the roar of the torrent and see its waters in the sunlight spanned with the many-coloured arch of Iris on the clouds of spray that rise above the turmoil. Is it not worth while to try and beg an old canister, if, haply, we can get out of it—that!

The root stock of the grass of Parnassus is of perennial growth, rather curiously short, and easily removable from the swamp habitat. The radical leaves are heart-shaped and borne on stalks. These stalks are often longer than those we have represented, the exigencies of our space requiring us to select a rather short-stalked example. These radical leaves form the great bulk of the foliage of the plant: it will be noted that their margins are unserrated, that they are quite smooth to the touch, and that the veining is somewhat conspicuous. The stem-leaves are of similar character. The stems are wiry and angular, and from about six inches to a foot or so in length, and each stem, a little below its centre, bears one leaf, and one only: this stem-leaf is stalkless, and embracing the stem. The flowers are white, rather crisp and papery in texture, and standing singly on the summit of each flower-bearing stem. The calyx is of five segments, the corolla of five spreading petals. The stamens are five in number, and alternating with these are five nectaries spreading like the fingers of a hand, their extremities each terminating in a little globular and pellucid gland. The capsules that succeed the flowers are reddish-brown in colour, and, when dry, opening out by four valves and revealing the very numerous seeds within. The plant is in flower from about August to October. In France it is the *Parnassie des marais.*

Why the plant should be called the grass of Parnassus does not at all appear, except that the early Greek writers so named it, since it is not a grass at all, and its habitat and associations are by no means confined to any specially classic spot. It is found throughout Northern and Central Europe and Northern Asia. Groundsel of Grindelwald would be as appropriate a name for the plant, since, like its present name, the grass of Parnassus, it would give absolutely no clue to its nature, associations, or anything else that one might wish to learn about the plant.



FENNEL.

THE FENNEL.

Fœniculum vulgare.
Nat. Ord., Umbelliferæ.

FENNEL should be sought for on the cliffs overlooking the sea. This is its natural habitat, though from having long been cultivated it may often be found as an escape or a survival: an escape from a garden in working order getting thrown out on to the rubbish heap, and thence carried again to the land; or a survival where a garden once existed. From time to time in the country one comes across a mass of fallen brick-work, where a cottage once stood and was burnt down or otherwise went to ruin, and around this a tangled wilderness of plants; some of them pure wildlings taking repossession of the soil, others being cultivated plants, like the horseradish or the fennel, that are still holding their own. Our present illustration was from a plant growing undoubtedly wild on a cliff overlooking the Bristol Channel, and not very far from Minehead.

The root of the fennel is perennial; when it once takes possession of its quarters it comes to stay. On digging it up we find it spindle-shaped, somewhat bulky, and of whitish colour. The stems are sturdily erect, strongly furrowed, freely branching, and from three to five feet, or even more, in height. The masses of yellow flowers that surmount them should be looked for in July and August. The leaves are large, very finely divided, and of a deep green. The flowers are in umbels; the ring of bracts that we so often find at the base of the umbel in other plants of the order being entirely wanting. The petals, five in number, have the inflexed point so characteristic of many of the umbellifers.

The generic name of the plant is from the old Latin name of the fennel, *Fœniculum.* This was corrupted in the Middle Ages into *Fanculum*, and this gave birth to its alternative popular name, fenkel. The word fennel is equally obviously derived from the Latin name, and we are told that all alike are derived from the Latin word *fœnum*, hay, from the idea that the odour of the leaves, when dried, was suggestive of sweet-smelling hay. The idea would appear to be somewhat far-fetched. We need scarcely point out that the monks were the great authorities on plants during the Middle Ages, and the Latin names they employed becoming corrupted by less scholarly tongues around them, such a transition as fanculum into fenkel was very easily effected.

The whole plant has an aromatic odour, and it will be recalled that Milton, in "Paradise Lost" dwells on how

> "A savoury odour blown,
> Grateful to appetite, more pleased my sense
> Than smell of sweetest fennel."

One might here bring forward a whole battery of stock sayings, from "Tastes differ" to "What is one man's meat is another man's poison," to confirm the fact that while in most matters there is room for difference of opinion, it would appear to be notably so in the matter of odours. One sees this over and over again, and the odour of the fennel is quite a case in point. We see it again in the case of the gladdon in the present volume.

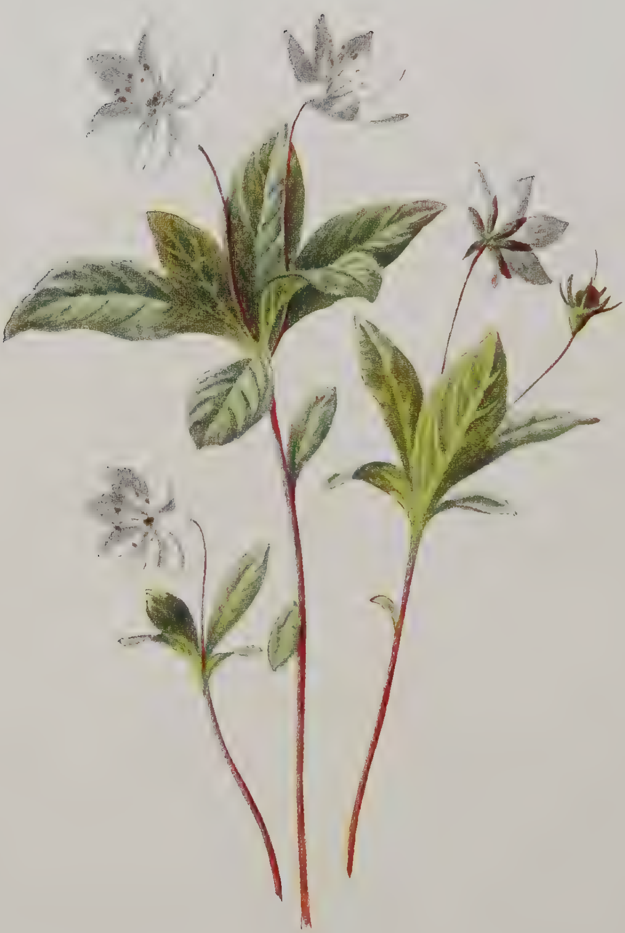
One suggestion would attribute the name to *fœnus* usury, because the seed sown yields a large increase Should this derivation satisfy any of our readers, it would be a matter of some little surprise to us. Linnæus called the fennel the *Anethum Fœniculum*, the generic name here being derived from two Greek words signifying upwards and to run, in allusion to the quick growth of the young plant.

The fennel is still occasionally used in medicine and finds a place in the pharmacopœia, the fruit being distilled and forming the *Oleum Fœniculi.* The fruit of the fennel has a strong and rather disagreeable odour, its medicinal properties depending upon a volatile oil. A distilled water is also prepared from it that is chiefly employed in veterinary practice. The seeds are used abroad, and especially in Germany, as a condiment, and the use of the plant as a sauce to mackerel and other fish is well known. An old writer tells us that "it consumes that phlegmatic humour which fish most plentifully afford and annoy the body with, though few that use it know wherefore they do it: I suppose the reason of its benefit this way is, because it is an herb of Mercury, and under Virgo, and therefore bears antipathy to Pisces." It is always pleasant to know really why we do anything, though we should have thought that something sympathetic to Pisces would in this case have been more desirable.

It was a very early belief that fennel was of wondrous efficacy in strengthening and restoring the sight. Longfellow, in one of his poems, as our readers will doubtless recall, dwells on this ancient idea:

> "Above the lower plants it towers,
> The fennel with its yellow flowers:
> And in an earlier age than ours
> Was gifted with the wondrous powers
> Lost vision to restore."

Even the serpents, if we may credit Pliny, had discovered its value, and ate the plant to sharpen their sight.



CHICKWEED WINTER-GREEN.

THE CHICKWEED WINTER-GREEN.

Trientalis Europœa.
Nat. Ord., Primulaceœ.

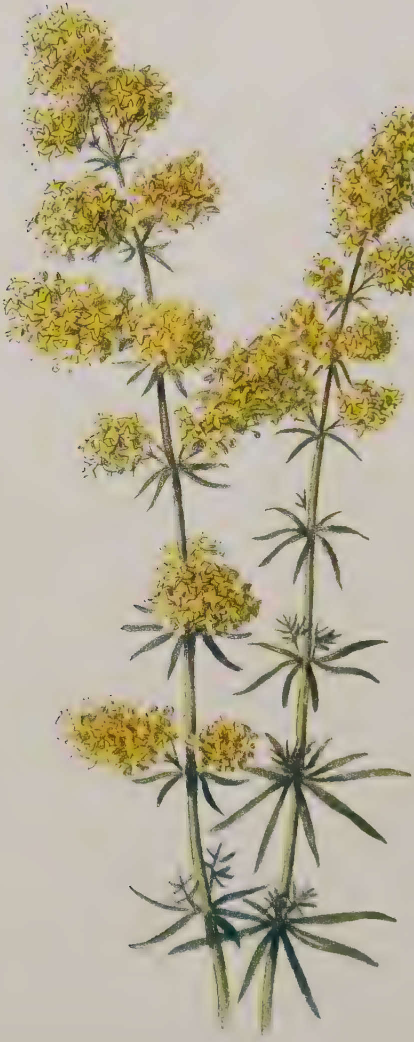
THE chickweed winter-green is one of those plants that are confined to a comparatively limited area, though abundant enough within that limit. The student of our British Flora will seek our present plant in vain should he search for it in any of our southern or midland shires. Kent knows it not, nor does any locality in Ireland yield an example of it, and far away north into the Highlands of Scotland must we wander if we would see it in profusion, though even as far south as Yorkshire, the county whence our present example came, it may be met with. It is distinctly a plant of the northern latitudes, and commonly to be found alike in Europe, Asia, and America as we approach, or reach, the Arctic circle, while it may be met with here and there in more southerly regions where the keen air of high mountain ranges produces conditions similar to those of its hyperborean surroundings. It is often very interesting to note how a plant of the mountain heights may be entirely lost sight of in the lowlands and reappear on a range a hundred miles or more away; and the chickweed winter-green is an excellent illustration of this interesting natural fact.

The *Trientalis* should be sought in the woods. Its flowering season is somewhat short, the month of June, with possibly a slight margin at one or the other end, according to locality, about marking it. The drawing from which our illustration is prepared was made, we see by a reference to our diary, on June 28th. This date was a little late, many of the plants having already gone out of blossom then.

The root-stock of the chickweed winter-green—strange that so graceful a plant should have so ungraceful a name—is perennial. The roots are thread-like and creeping. The stems are boldly erect, very simple in character, often red in colour, rarely more than about six inches in height, and often much less. These stems, until we reach their summits, bear only a few small leaves at a considerable distance apart, but they terminate, as our illustration very clearly shows, in a whorl of much larger ones, a cluster of from four to six or seven. These are broadly lanceolate in form, and rather acutely pointed. Their margins are free from all notching and are somewhat waving, while the veining of the leaves is conspicuous. From the midst of this terminal cluster of foliage rise the flower-bearing stems or pedicels: these are very slender, often red in colour, and each bears but one flower. These flower-bearers are from one to four in number, and the flower they bear is, ordinarily, white, though occasionally of a pinkish tinge. The corolla is what is termed rotate, flattened out a good deal: the botanical term signifies "like a wheel," but the form in the present case is more that of a saucer. Like the calyx and stamens, which agree with it in its eccentricities, the lobes of which it is composed are not constant in number, but may be anything from five to nine, with a marked preference for seven. The capsules also have their divisions thus varying in number. The seeds are clothed with a reticulated covering like the most delicate lace-work: this is white in colour. The plant is a very near relative of the loosestrife or *Lysimachia* genus, as anyone referring to our drawing of the wood loosestrife in another volume will readily perceive. We have also figured two others of this genus, as a reference to our index will duly indicate.

Botanical names, like the popular ones, are sometimes very happy in their significance, but in not a few instances we either fail to grasp their significance, or, having grasped it, are not so greatly impressed with their appropriateness as we could desire to be. We would feign hope that the generic name of the chickweed winter-green, *Trientalis*, is one of those of which the significance is now lost, as, if the explanation given of its meaning be the true one, we appear to have reached the lowest level of bathos in plant nomenclature. *Trientalis* is from a Latin word meaning one-third. One-third of what, is a matter we are left to guess at, but one expositor assumes that it means one-third of a foot, and that the name was given to the plant because it is one-third of a foot high!

Like most other plants, the chickweed winter-green was reputed by our ancestors to be of healing power, "a singularly good wound-herb, and an especial remedy for healing speedily." Either the freshly gathered leaves were bruised and applied to the wound, or the juice of them was employed. Sometimes, with the aid of lard, olive oil, or wax, a "sovereign salve" was compounded from the foliage, or its leaves were boiled in wine or water as a soothing internal application, while at other times a distillation was effected, every form of "exhibition," as our modern doctors would call it, appearing to be of great healing value, or at least having the reputation of being so, which is not perhaps quite the same thing.



YELLOW BEDSTRAW

THE
YELLOW BEDSTRAW.

Galium verum.
Nat. Ord., Rubiaceæ.

DIVERS plants of this order appear elsewhere in these volumes, the goose-grass, *G. Aparine,* and the crosswort, *G. cruciatum,* the Sherardia, *S. arvensis,* and the fragrant woodruff, *Asperula odorata,* being figured and described; and here we give a representative species of the bedstraws. Of these we have several in Britain: as, for instance, the heath bedstraw, *G. saxatile,* a white-flowered plant found abundantly on heathlands and mountain pastures; the water-bedstraw, *G. palustre,* also a common enough plant if sought in marshy places; and the hedge-bedstraw, *G. Mullugo,* a plant, as its name implies, of the hedgerows and copses. To them some few others might be added, though these latter are of somewhat less common occurrence. The most attractive plant of the genus, though all are sufficiently attractive to make comparison difficult, if not invidious, is, possibly, the plant we here figure. It, and the crosswort, are the only two yellow-flowered species, all the others having white blossoms.

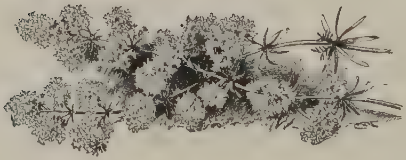
The root-stock of the yellow bedstraw is perennial, creeping, slender, somewhat woody. The stalks are, ordinarily, from about six inches to a foot long, though exceptional plants may be found outside each of these measurements. These stalks are freely branching near their bases, and are sometimes almost lying on the ground, and at other times found erect, according to the vigour of the plant and the hardness or luxuriance of its lot. They are slightly four-cornered, a little crooked in the general line of direction, jointed at intervals, a little rough to the touch, and pale green in colour. The lateral flower-bearing stalks are in pairs, and of varying length, each pair being crossways to the pairs above and below it. The leaves of the yellow bedstraw are an inch or so in length, arranged in rings on the stalk, about six or eight in each whorl, spreading sharply out, so as sometimes even to turn a little back. The margin on each side is often a little rolled inwards. The foliage is of a dark green colour and slightly glossy surface. The lower whorls have the greater number of radiating leaves. The flowers are in a rather dense panicle, and, though small individually, very numerous in the aggregate. The monopetalous corolla has four segments, is widely spreading, and, like the leaves, turned down below a level surface. The stamens are four in number, on long filaments, having the anthers at first yellow and then turning to brown. The fruit is dry and globular.

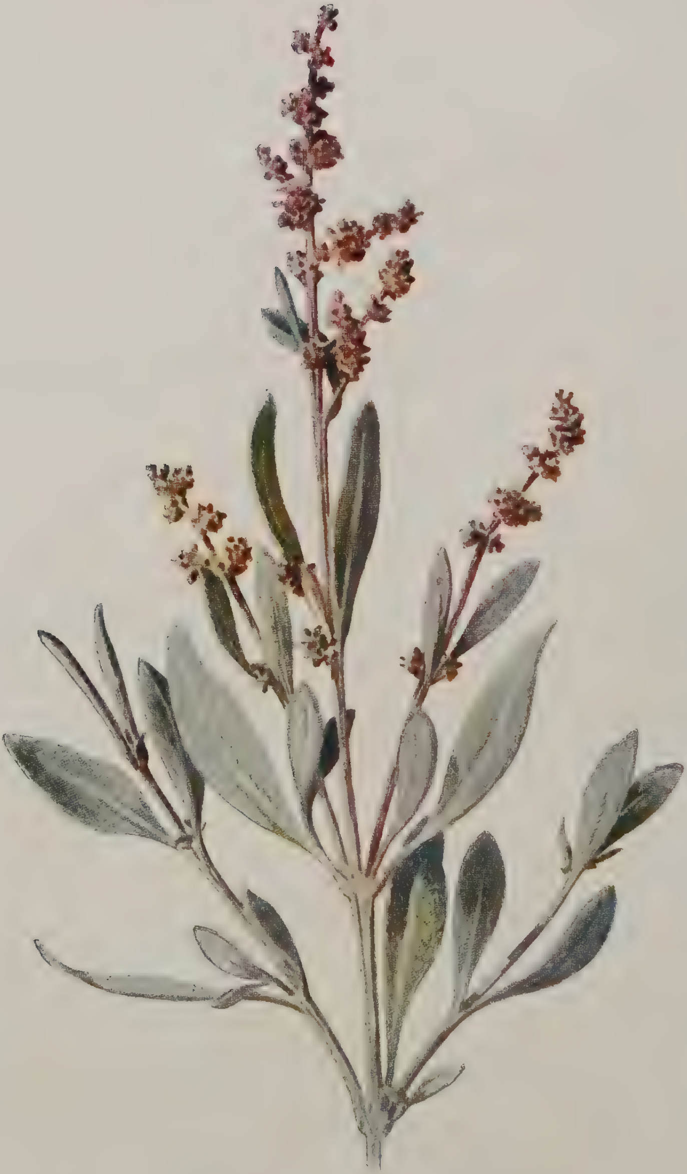
The yellow bedstraw is a plant of the dry pastures and borders of fields; a sandy soil seems to be especially favourable to its development, and it is often to be found near the sea. It is in flower from June to

September, and often covers large stretches of ground with a carpeting of yellow. The flowers have a somewhat strong and peculiar odour, which some would describe as aromatic and fragrant, terms held by others as rather more complimentary than they could quite willingly subscribe to, and it is with this latter class that we, personally, find ourselves most in sympathy. When we have an exceptionally dry July or August, and all the surrounding herbage is parched up, the foliage of the bedstraw remains as verdant as ever, and it has been suggested that it might be cultivated with advantage on such lawns as "disclose an arid hue." The practical disadvantage, as we have ourselves experienced, is that unless the whole extent be laid down with bedstraw instead of grass, a proceeding that few would advocate, the patches of emerald verdure only tend to make the surrounding aridity more painfully conspicuous.

Curtis, in his "Flora Londinensis," tells us that "an ingenious gentleman, conversant in dyeing, assured me that it was a plant highly deserving of culture as an article in that business: for that the roots, though not so large as those of madder, produced a brighter colour." The generic name, *Galium*, is from the Greek word for milk, the plant having a sensible acidity that has rendered it useful in curdling milk. Hence an old English name for the bedstraw is the cheese-rennet, while the French, for like cause, call it the *caille-lait*, or, sometimes, the *petit muguet*, or little dandy, from its graceful delicacy. In the Middle Ages it was the *Stæ. Mariæ Stramen*, or Our Lady's Bedstraw.

The flowering tops of the yellow bedstraw, infused in water, have been used in country districts as a pleasant acidulous summer drink. An old writer tells us that the flowers should be boiled in olive oil as a remedy for scalds or burns, and that this preparation is "good also to bathe the feet of travellers and lacquies, whose long running causes weariness and stiffness in the sinews and joints." We have here an interesting allusion to the running footmen in attendance on our more aristocratic ancestors as they were driven in state to various Court or society functions.





SEA PURSLANE.

THE SEA PURSLANE.

Atriplex portulacoides.
Nat. Ord., Chenopodiaceæ.

IF not so charming a wild flower as many another, our present plant has sufficient claim, from its abundance, to a place in our series, nor, indeed, are its charms so entirely wanting as to make apologies necessary on its behalf, for a well-grown plant of sea purslane, with its delicate tints of purple and brown and its foliage of frosted silver, has a distinct attractiveness and charm of its own. We must always accept a plant, or anything else for that matter, for what it is, and not blame it for what it is not.

The sea purslane may be looked for around our coasts, but, while it is common enough on most parts of the littoral of England and Ireland, it appears to be much less freely found on the sea-shores of Scotland, rising, indeed, in this latter case, to the dignity of having special localities recorded for its occurrence. It appears to thrive best in saline marshes and on muddy foreshores, localities where comparatively little else prospers, and where its presence, therefore, becomes the more acceptable. The particular piece figured we gathered in the salt marshes at the mouth of the Cuckmere, a river that runs into the sea between Seaford and Eastbourne. It is a perennial, and flowers during the autumn months, from August well into October.

The sea purslane is a shrubby and much-branching plant, and, like most other seaside things, attaining to no great height, a foot to eighteen inches being its normal altitude, though it may sometimes reach two feet. The lower portion of the stem is often somewhat creeping and rooting, a state of things that gives it a greater grip of the ground in view of the fierce gales that are entirely ready to uproot and overturn anything, from a purslane to a lighthouse, that is not sufficiently stable in its foundations to resist their force. The stems are often of a delicate purple colour, more or less covered with a grey bloom. The foliage is of pointed lance-head form, thick in texture, as are the leaves of so many seaside plants—the samphire, for example—and entirely silvery white in colour. The minute flowers are in little clusters that succeed one another at intervals on the short branches near the summit of the plant, and form a terminal head. The flowers are of two kinds: the one is stamen-bearing, these stamens being five in number, and within a regular five-cleft perianth, while the other is pistil-bearing, and consists of two flattened segments, closing somewhat like the leaves of a book, and contained within the ovary. After the flowering is over, this flattened perianth considerably enlarges. This construction of the seed-bearing flower is of some little specific importance, for in the present species and the *A. pedunculata* the two segments are united nearly to the top, while in another species, the *A. rosea,* these segments are not joined above their centres, and in a third, the *A. hortensis,* they are not joined at all.

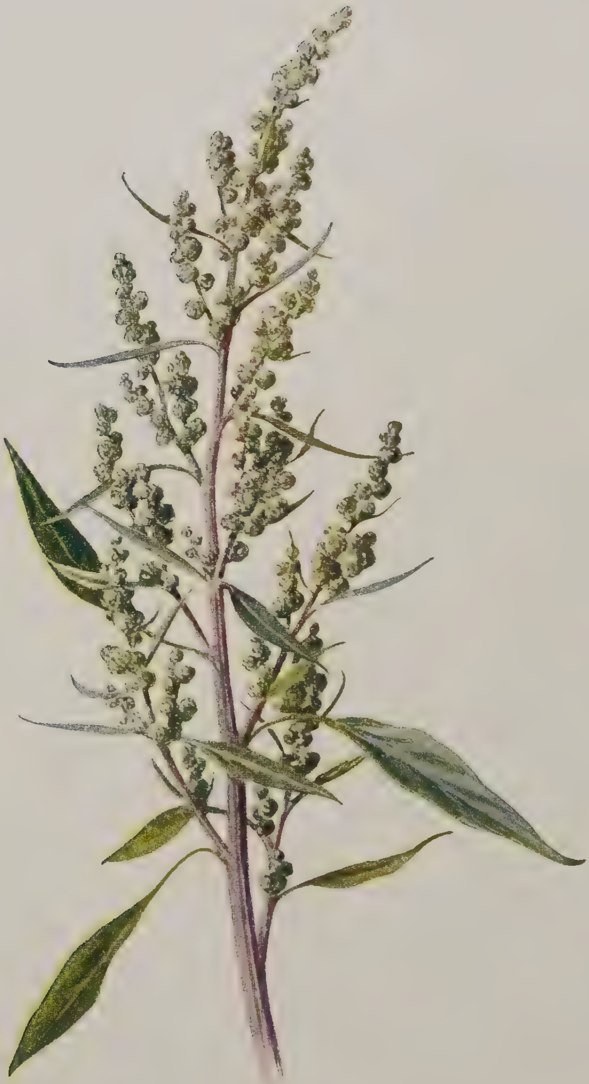
An entirely different plant, one of the great pink family, the *Honckenya peploides,* is sometimes called the ovate-leaved sea purslane. It is a common plant on sandy beaches, with large white five-petalled blossoms. Another name for it is the ovate sandwort.

That our present plant should be called the sea purslane seems evidently to imply that somewhere else is to be found a purslane that is not maritime in its habitat. This is the *Portulaca sativa,* not an English plant at all, and only found in our gardens in a state of cultivation.

The generic title of the sea purslane, *Atriplex,* is one of Pliny's plant names. It is derived from two Greek words signifying not to flourish, but why such a name should have been assigned to this, or, possibly, some other plant, in these early days of plant-study, does not now at all appear. The specific, or adjective, name, *portulacoides,* signifies resembling the purslane plant, the *portulaca.* The termination, *oides,* always carries this significance of resemblance to something else. Thus we have *prenanthoides,* meaning like the *Prenanthus; rapunculoides,* resembling the *Rapunculus*; *nymphœoides,* signifying *Nymphœa*-like; *bromoides,* like the *Bromus.*

Another name for the sea purslane is the Shrubby Orache; one name is about as commonly used as the other. There are several of these oraches, and there is a strong family likeness between them, not only in form but in habitat. Not only is our present plant a dweller by the sea, but so also are the allied species, the *A. pedunculata*, the *A. laciniata*, the *A. Babingtoni*, and the *A. patula*.

Why the plant should be called purslane seems to be a point entirely lost. Turner, who wrote the first English Herbal of any value, and dedicated it to Queen Elizabeth, calls the plant the purcellaine, and in the "Grete Herball," published in black letter in 1516, it is the porcelayne; but as to how these names arose in the first place we can find no clue. Gerard tells us that in his day the succulent leaves were "preserved in salt or pickle as capers are, and to be served and eaten at men's tables in stead of them, and that without any mislike of taste, to which it is pleasant." These leaves were also, by our forefathers, "boyled," the resulting decoction being held to be of great value "against crampes and drawings awrie of sinewes."



WHITE GOOSEFOOT.

THE WHITE GOOSEFOOT.

Chenopodium album.
Nat. Ord., Chenopodiaceæ.

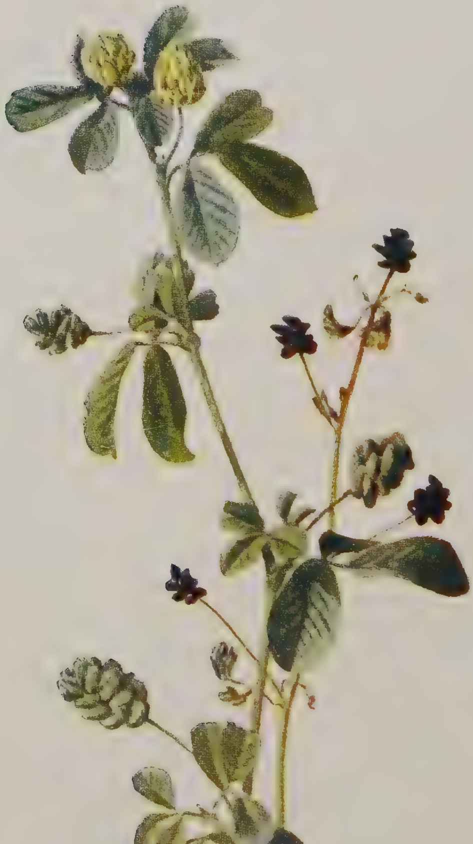
AMONGST our popular plant names a very considerable number are found to be based on some resemblance, more or less obvious, to some other object. This desire to find a similarity, to display one's acumen in detecting a likeness, is a very common failing—or feature, if the first word be held too severe—amongst the less educated, so that when one visits, for instance, any great object of natural interest, one often finds it vulgarised, or rendered more piquant, as others would put it, by some suggestion or association of ideas entirely foreign to it. When one visits a certain fine cavern in the limestone, those to whom the great natural beauty and interest of the stalactites themselves are not sufficiently inspiring receive the needful added interest by being stood in front of one which the guide calls the goose and another which he terms the towel, and which appear thereby to evoke an enormously added appreciation from some, at least, of the spectators. That Nature through the countless ages should create a noble stalactite seems to evoke but little enthusiasm, but that it should be dimly like a lace curtain is quite another matter and of abundant interest.

Our plant is called the goosefoot because its leaves were held by some past nomenclator with a powerful imagination to resemble the foot of a goose, and the name, once bestowed, has remained. We have in like manner, as names suggestive of resemblance, the colt's-foot, the bear's-foot, the bird's-foot, the dove's-foot, the crow-foot, adder's-tongue, lamb's-tongue, ox-tongue, hound's-tongue, hart's-tongue, bird's-eye, pheasant's-eye, ox-eye, horse-tail, mouse-tail, cat's-tail, cat's-ear, mouse-ear, lark's-spur, cock's-comb, crane's-bill, swine's-snout, goat's-beard, and many others needless to recite. Sometimes the common objects of daily service supplied a verisimilitude, such as lady's slipper, monk's hood, shepherd's purse, and the like, while even the maiden's hair and the dead man's fingers were pressed into the service. In the greater number of cases the resemblance at best is, happily, but slight.

The root of the white goosefoot is very fibrous, and white in colour. The plant is an annual. The main stem is from one to three feet high, and erect in general direction, striated, smooth, solid, and branching freely, the numerous lateral branches partaking of the general upright character. These branches are thrown out not in pairs, but alternately, a feature that even the small portion we are able to show in the limited space at our command very clearly indicates. The stems are often more or less purplish in colour, though we may also not unfrequently find them green throughout. All the foliage is borne on stalks. The lower leaves are of a broad egg-shaped form, coming to a point at the apex, or broadly spindle-shaped, or sometimes almost triangular in general mass, and in any case deeply and irregularly cut in by a few large and rounded teeth. The upper leaves, as we see by our figure, are what is botanically termed entire, bounded by one single line, not cut up into lobes or serrations. They are also much more attenuated in form and much smaller in size than the lower. The clusters of flowers are in short spikes that rise from the axils of the upper leaves. These clusters sometimes thickly and continuously clothe the stems, or they may be interrupted at intervals, while these axillary stems are either simple or slightly branching. The individual flowers are minute in size, pale green in colour, a perianth of five segments. The leaves are of a more or less mealy grey, and especially on their under-surfaces, hence the prefix white in the popular name. Specimens may occasionally be found in which the leaves have little or nothing of this grey colour, and in which all, lower as well as upper, are nearly or quite entire: this has been distinguished as a sub-species, the green goosefoot, *Chenopodium viride.*

Ten species of goosefoot are indigenous to Britain, the present being the most common member of the genus. It is to be found in abundance on waste land, in neglected gardens, on rubbish heaps, and often amongst crops, and has been carried inadvertently almost all over the world. It is quick-growing and troublesome, monopolising large patches of ground and choking out other plants, and owes its abundance no doubt, a good deal to that misguided practice, one too often sees, of allowing every kind of weed to seed on the manure heap, or on the rubbish pile in the corner of the field.

Our forefathers, before many of the excellent vegetables now in use were introduced, cultivated the plant, and found it palatable and wholesome. Without any cultivation, the plant is abundant enough, and it seems open to question whether to class it as an unwelcome and worthless intruder or as a valuable pot-herb. It is in France the *ansérine blanche,* while the generic name of the plant, *Chenopodium,* is but a Greek rendering of the popular name. It has also been called frostweed, from its hoary appearance, and an old herbalist name for it was the *pes anserinus,* this time a Latin rendering of the name goosefoot.



BLACK MEDICK

THE BLACK MEDICK.

Medicago lupulina.
Nat. Ord., Leguminosæ.

SOME plants require a little seeking for, while others come unsought, and our present plant may be taken as a type of this latter class. And a very extensive class it is, too, for no sooner does one get possession of a little garden ground or a piece of meadow-land than unbidden guests spring up to greet him at every turn. Roughly speaking, though, no doubt, other classifications might be suggested, the gardener's or farmer's interest is twofold: to tend and nurture the things that he wants to prosper, and to wage unceasing war on those others that he does not welcome, and that would soon, if unchecked, bring to nought all his labours. Our own garden may be an exception, as we admit and welcome many things* not put down in the florist's catalogues, or held fit companions for dahlias, roses, petunias, and such-like floral aristocrats; but even then one's patience sometimes rebels when the mallows want to come up in scores, and the little black medick seedlings in hundreds. The black medick is an annual, but it seeds so very freely, and the seeds spring up so readily, that it will always be found in abundance. It flowers throughout the whole floral season, and we need scarcely point out that profuse flowering often implies an equally profuse seeding, and it certainly does so in this case. It seems especially to favour cultivated ground, gardens, and arable land, and is abundant throughout Britain, save in the north of Scotland.

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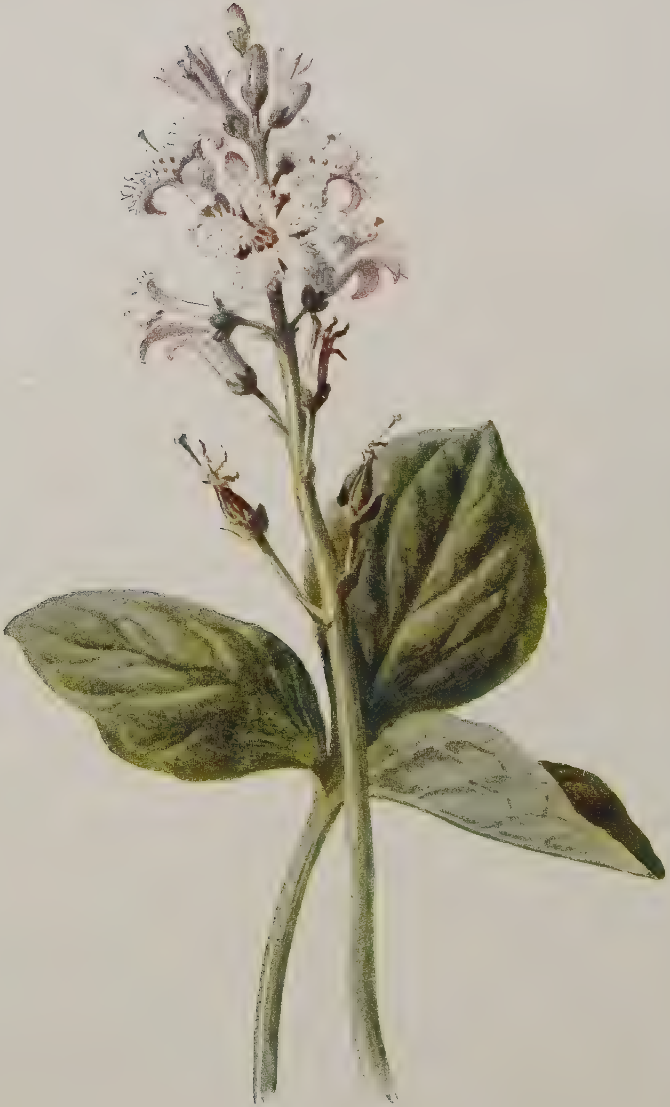
* As, for instance, colt's-foot, bindweed, mallow, stone crop, strawberry, primrose, thyme, ragwort, columbine, pilewort, shining crane's bill, herb-robert, moneywort, foxglove, periwinkle, lily of the valley, tansy, alkanet, woodruff, valerian, dove's foot, crane's bill, bryony, hop, honeysuckle, wood-sorrel, nettle-leaved bellflower, bittersweet, grass of Parnassus, blue-bottle, marjoram, enchanter's nightshade, yellow flag, feverfew, fool's parsley, ground ivy, mullein, thorn apple, house-leek, goat's beard, silverweed, thrift, snowdrop, tormentil, cinquefoil, Adonis flower, etc., etc., etc.

The black medick throws out numerous stems from at or near the ground level, and these spread for a considerable distance, eighteen inches or more. They are ordinarily thus spreading over the surface of the ground, but under some conditions, as, for instance, amongst other herbage, they may be found more or less ascending in direction. The piece we have figured is one of these ascending stems: one detects this from the position of the leaves; had it been a horizontal growth, the leaves would all, in their striving towards the light, have presented themselves to us in plan view, all the leaflets equally displayed to sight. The stem has the zigzag character, changing direction at each joint, that is so characteristic a feature in many of these pea-flowers. The leaves are trifoliate, made up of three leaflets, as in the clover and melilot, figured in this present volume, and as we see in many other plants of this great natural order. Each leaflet is egg-shaped, the more pointed end of the oval being at the base, the form known as obovate, and at the foot of each leaf-stalk will be found a pair of stipules. The flower-bearing stems, longer than the leaf-bearers, are surmounted by a compact head of numerous small bright yellow flowers of the pea type. The pods that succeed these blossoms each contain a single seed: they are kidney-shaped, and, like the flowers, form a dense mass, rough and rugged from the longitudinal veins that are so prominent. On ripening and drying, these pods are reduced considerably in size, and turn black. Our illustration shows them in both the verdant and nigrescent stages, and it is the conspicuous effect of the ripened fruit that has bestowed the prefix black as a distinctive title for the plant amongst its fellow medicks.

But why medick? Except that it is evidently a word derived from its generic name *Medicago*, which only pushes back the problem one stage, the word sounds meaningless, and we have to travel back some centuries before we can find a solution of our question. The name *medica* was bestowed perhaps on this or perhaps on some other plant by the ancient Greeks, and Pliny, we find, declares that the plant in question was introduced into Greece from Media during the war with Darius; hence it is the Median herb. It was long held in great repute as a forage plant, and Pliny gives minute instructions for its cultivation; and we can well understand that if the plants were brought by the invading host as fodder for their horses, the seeds would be scattered on Greek soil and take possession of it. It has, until quite lately, been grown as a field crop for sheep and cattle, though some of the other plants of the order, the lucernes or clovers, have nearly or quite supplanted it. Our farmers of a generation or two back thought so highly of its nutritious qualities that its popular name was nonsuch, though a generation or two still further back that name was given to the scarlet lychnis, the idea suggested being that amongst all the brilliant blossoms none were so attractive as the lychnis: amongst all the fodder plants, none so valuable as the nonsuch.



BUCKBEAN

THE BUCKBEAN.

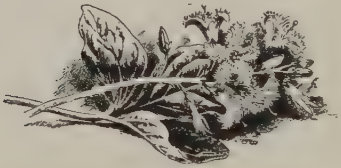
Menyanthes trifoliata.
Nat. Ord., Gentianaceæ.

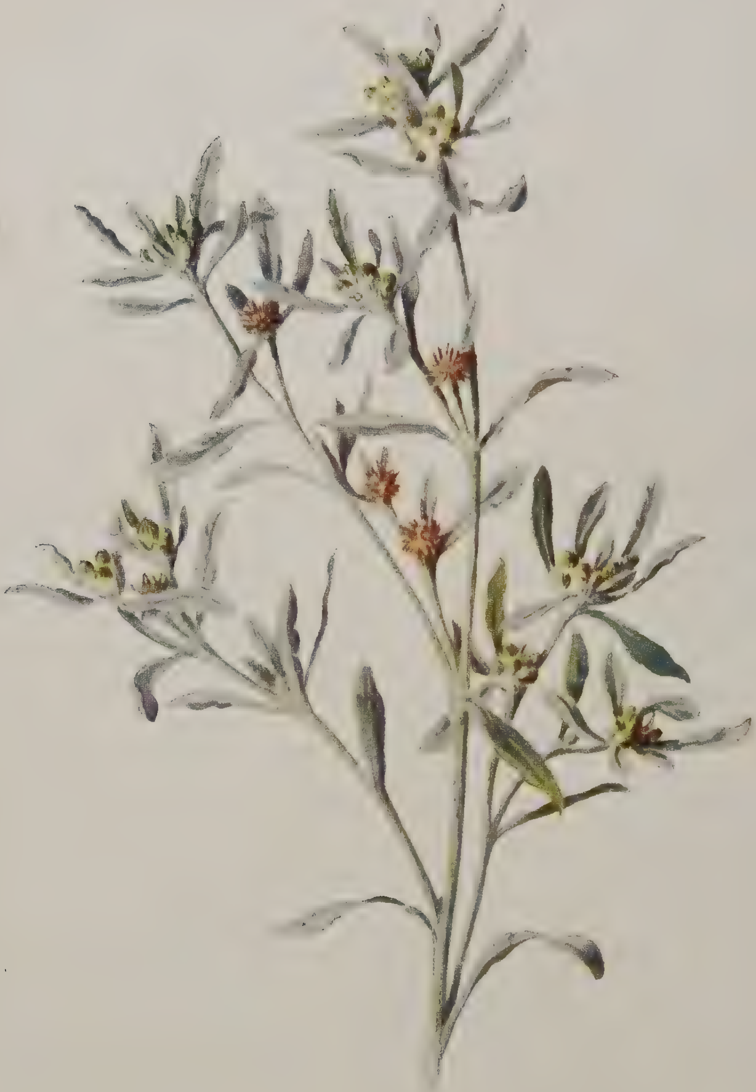
AS this beautiful plant is a dweller in bog and marsh land, it has been suggested that its name, buckbean, is really a corruption of bog-bean, and this sounds very reasonable indeed; but it is really only one illustration the more of the tendency that is always cropping up to substitute for a name not understood something else that is as plain to all beholders as the proverbial pikestaff itself. Thus the costermonger finds asparagus an entirely meaningless word, and puts in its place sparrow-grass; and the sailor, feeling Bellerophon to be utterly pointless, substitutes Billy-Ruffian as a much happier name for a man-of-war. Now in Holland we find our plant is called *bocks-boonen,* and in Germany it is *bocksbohne,* or sometimes *scharbocks-klee,* and in England it is buckbean. Why? Because the plant was held to be of great value as a remedy against the once-dreaded scurvy. *Scharbock* is a corruption of the Latin *scorbutus*, the old medical name for the disease, a name still suggested to the ear in our better-known word, antiscorbutic. Bean is probably an affix from the resemblance of the foliage to that of the beans grown in cottage gardens. Gerard, we see, says that the leaves are "like to those of the garden beane." Some old writers call it the marsh clover, or water trefoil, and it is in France the *trèfle des marais*, while its specific name, *trifoliata*, carries the same reference to the form of its leaves. The generic name, *Menyanthes*, is from two Greek words signifying month and flower. It was a name bestowed by Linnæus, and it has been suggested that the plant was so called because it remains in flower about a month. Should any of our readers consider this explanation of the word a somewhat feeble one, we shall not be at all disposed to dispute their opinion, and especially as we find the plant flowering during May, June, and July.

The buckbean is a plant of frequent occurrence in marshy ground, in fen-land, and in shallow pools, and is diffused all over the country where the conditions are favourable to its growth. It has a widely creeping root-stock, and throws out an abundance of densely matted roots, so that it often forms large masses extending over many square yards, rendering the boggy ground in these places sufficiently firm to bear a considerable weight unyieldingly.

The leaves all spring directly from the root-stock, and are composed of three smooth leaflets of a clear bright green, having their margins somewhat undulating, and what is termed entire—that is to say, without any notching or toothing. Each leaf is borne on a rather long stalk, though not so long as the flowering stem that rises from their midst. This flower-bearing stem is about a foot in height, smooth, cylindrical, leafless, and bearing near its summit the raceme of flowers, each flower having at the base of its pedicel a small ovate bract. The calyx is cut up into five somewhat acute segments, and from this rises the bell-shaped or tubular corolla. This, in turn, is made up of five segments, much larger than those of the calyx, and when the flower is fully expanded these curve boldly backwards. They are white in colour, and, externally, are tipped with rose. Their inner surface is thickly covered with white filaments, a very striking and beautiful feature, and in the centre we have the five yellow anthers. One of the older writers very aptly and quaintly describes the inflorescence as "a bush of feather-like floures of a white colour, dasht ouer slightly with a wash of light carnation." These altogether charming flowers are succeeded by small capsules bearing the seeds. Many of the marsh-plants are especially attractive—if our readers will turn to our illustrations, for example, of the bog-pimpernel, or the bog-campanula, they will be entirely at one with us in our eulogy of them; and the buckbean will certainly make another example as beautiful as these.

The buckbean has been largely used in medicine from its tonic virtues and as a febrifuge. Neither flowers nor leaves when growing have any odour, but on maceration or infusion of the leaves in water an intense bitter results. An extract is also prepared from the dried leaves that has been found to possess considerable efficacy in rheumatism, intermittent fever, and other ills of the flesh. In the marshy districts where the plants are to be found may too often also be found the victims of low fever and ague, and for these diseases it has been held to be a specific. The leaves have also been used as a substitute for hops in brewing, two ounces of these dried leaves being equal in efficacy to sixteen ounces of hops. Though now but rarely used, the buckbean, as yielding a bitter tonic, is still found in our Materia Medica.





MARSH CUDWEED.

THE MARSH CUDWEED

Gnaphalium uliginosum.
Nat. Ord., Compositæ.

AGAIN have we presented to us in our illustration, and as the subject of our present remarks, one of the characteristic plants of the marsh and fen-land. This particular species of cudweed—there are several of them — is common enough all over Great Britain, yet it is not a particularly well-known plant, probably, to many of our readers. For one thing, it must be confessed that it lacks something of the attractiveness of many better-known plants. Its insignificant flowers, small in size and quiet in colour, cannot compete with the golden splendour of its neighbour, the water iris, for example, though the plant has a quiet beauty of its own that will repay our attention. But the main reason, doubtless, for any more extended want of knowledge of it arises from its favourite habitat. Thousands of people will delight in a stroll across the meadows, or beneath the shade of the forest trees, across the breezy common, or through the cornfields, to one who would deliberately wend his way to where the soft ground yields beneath his tread while his footprints become a chain of small lakes behind him as they slowly fill up with the super-abundant moisture held in the water-logged land.

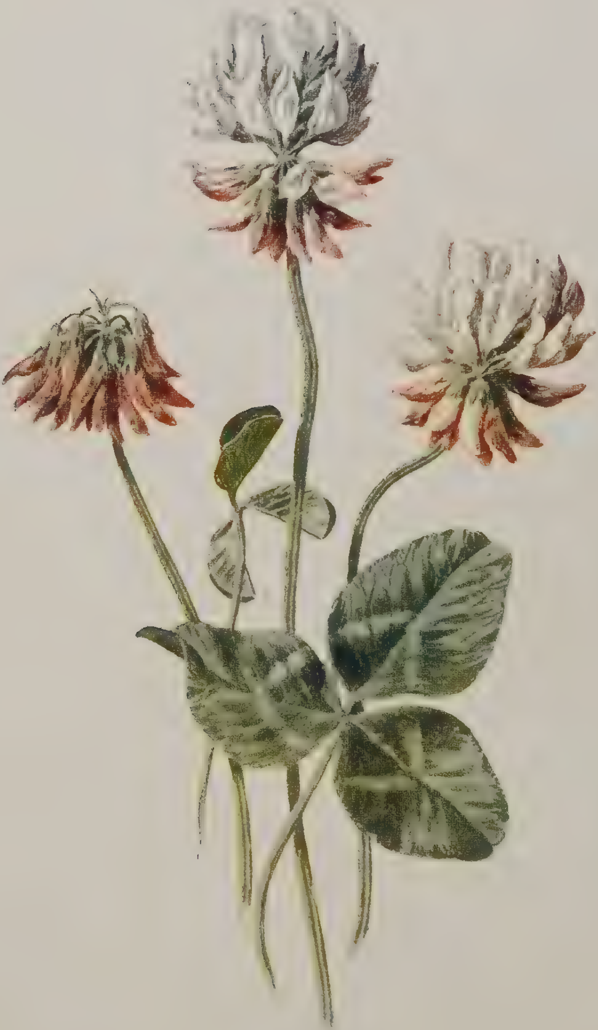
While some few men have their business in the fen-lands, as boatmen on the slowly moving streams, or as gatherers for commercial purposes of the osiers and rushes that flourish so freely around them, while others repair to them for pleasure, one with his gun, another with his fishing-rod, or for the scientific interest they are able to evolve from the special insects, or birds, or plants that they there find, the ordinary individual, he who in these latter days is defined as "the man in the street," feels no irresistible call to plunge into bog and quagmire when all that interests him is to be found outside of this. Whatever of emptiness and unsatisfactoriness his life, in his more morbid moments of introspection, may appear to present to him, it will not ordinarily reproachfully occur to him that a deplorable want of knowledge of the cudweed and its floral companions is one of these shortcomings.

In spite of its name, our present plant is, however, not so entirely of the marsh marshy as some others of our plants. It may be found in barren waste ground, where, from want of efficient drainage, water more or less constantly stands, or percolates. The particular specimen we figure we gathered near Seaford, where the Cuckmere slowly finds its way to the sea between embankments that keep it within bounds and prevent it from flooding large areas of flat and low-lying ground on either side of its winding course. This low-lying ground, alternately wet by the percolation through these banks at high tide, and dry by the soakage away at low tide, is a quite ideal spot for many of these marsh-loving plants.

The marsh cudweed is an annual, but, like most of its order, flowers and seeds freely, and, therefore, in localities where it has once established itself, occurs almost as certainly as though a perennial. It is found in flower during July, August, and September. Growing as it does in rather thick tufts, it is the more likely to come under observation.

The stems of the marsh cudweed are very much branched, as our illustration sufficiently clearly indicates and are what is termed diffuse in their growth. The leaves are linear-lanceolate in form, and, like the stems, covered with a grey down. All the leaves, but more noticeably the upper ones on the plant, have their edges considerably waved, a feature that at once attracts attention. The flower heads are small, many clustered together, and often in the midst of a tuft of leaves terminating a small branch. The bracts or scales of the involucre are of a yellowish brown or rusty colour, and shining, forming the most conspicuous feature, the point that at once catches the eye at the first glance at the flower head.

The name *Gnaphalium* was applied to this or some kindred plant from very early times; we find it, for instance, in the writings of Dioscorides. It is Greek in its origin, and signifies soft down or wool, and anyone seeing the plant clothed with its grey down has no difficulty in accepting the name as a most appropriate one. The specific name, *uliginosum*, refers to the home of the plant on marshy ground, so we see that the whole name is admirably descriptive. The plant is sometimes called cotton-weed, a name again that is clearly suggested by the appearance of its foliage clad with this grey envelopment; while another old name is the chafe-weed, though whether our ancestors really gathered the plant to allay irritation of the skin, or merely theorised that such a soft, woolly looking herb might be thus employed, we cannot now determine. It was also commended in its dried state as a preventive against moths, when placed in the wardrobe, and, better still, if "boyled in wine and drunken it prevaileth against the bitings and stingings of venomous beasts." The dried plant, when ignited, gave off a smoke that was held remedial for asthma and bronchial trouble.



WHITE CLOVER

THE WHITE CLOVER.

Trifolium repens.
Nat. Ord., Leguminosæ.

OUR present plant, the white clover, is one of the most widely distributed of the great order of the leguminous plants, of which so many appear in our pages. Many plants have a very definite period of flowering, a time within very fixed limits when they should be sought, and outside of which it is entirely hopeless to think of finding them, while others bear alike the sunny but wind-swept days of spring, the glowing heat of summer, the dark and misty days of autumn, and even the frosts of winter, and bloom cheerily through them all. There is scarcely a month in the year when one would not, for instance, find the furze in blossom, scarcely a week in the year when one might not bring home some flowering stems of red or white archangel. The white clover treats us well-nigh as liberally, and for many months is with us, though May, June, July, August, September, and October may be taken as pre-eminently its flowering season, the other six months producing examples more or less dependent on mildness of season, shelter of position, and such-like favouring influences.

The generic name, *Trifolium*, meaning three-leaf, has obvious reference to the form of the foliage in the plants of this genus. This form of leaf may be seen again in the black medick, a plant illustrated in the present volume, in the purple clover, the hare's-foot, and many other plants in this extensive order. The specific name, *repens*, refers to the creeping habit of the plant. It has a wonderful power of spreading over the ground. Curtis, in his "Flora Londinensis," mentions that he had under observation one little seedling in his garden, and found that by the end of the summer it had grown and grown, taking possession of the ground in all directions, until it owned a little plot of its own more than a yard square, say, roughly, ten square feet. Hence, clearly enough, its specific name of creeping.

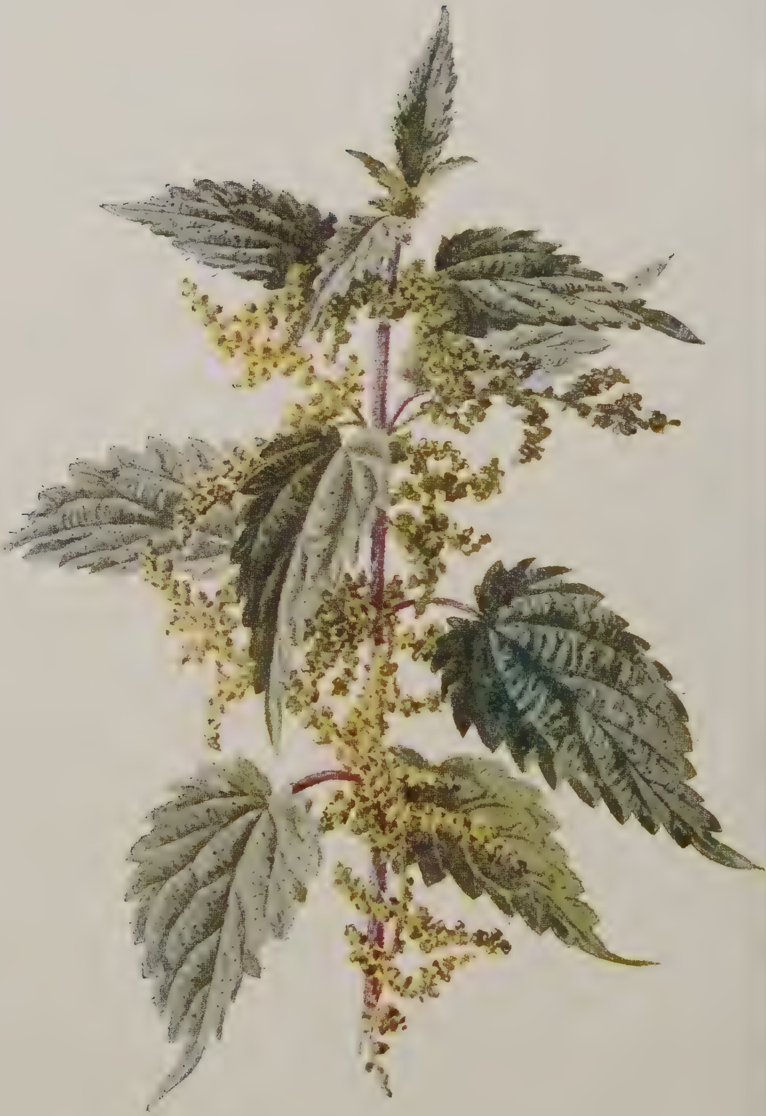
Its popular name clover, according to Prior, the author of a most useful and interesting book, "Popular Names of British Plants," is from the Latin *clava*, and refers to the *clava trinodis* of Hercules. It is, in fact, the "club" of our playing cards, so named from its resemblance in outline to a clover leaf with its three leaflets. Other authorities tell us that it is called clover from the cloven form of the leaf, cleft, as we see it, into three quite distinct leaflets. It is, of course, white clover to distinguish it from the purple clover it otherwise much resembles. It is a plant much valued by the bees, especially as it is often in flower when most other blossoms have died away, and one of its old names, arising from this, is the honeysuck.

The white clover is a perennial, having a very fibrous root, and throwing off numerous creeping stems that spread freely and root at their nodes, the points where leaves are given off. The flower stems vary in height from an inch or two to nearly a foot, according to the position the plant is found in and the hardness or otherwise of the conditions it has to accommodate itself to.

The stipules are small, ovate, pointed, and often veined in red or purplish colour. The leaves are composed of three leaflets, obovate or inversely heart-shaped, and generally having a whitish mark in their centres. The peduncles, or flower-bearing stems, are generally of considerable length, furrowed, and, while erect in general direction, often curiously curved and twisted; a feature very evident in our illustration. These peduncles bear at their extremities a single globular cluster of flowers. These flowers, ordinarily white, are sometimes tinged with pink, and as they decay turn to brown; while still flowering each little blossom stands boldly up, but as they begin to wither they droop until the once erect position is completely lost, and they hang dry and withered, their direction entirely reversed. The pod is short, containing from two to four seeds, enclosed by the withered flowers.

The plant is often cultivated, one of its chief excellences being that it yields good herbage for horses and cattle when in dry seasons the grasses are burnt up. The contrast between the withered grass and the beautiful verdure of the clover is then very marked.

Though a true wild plant, and of abundant distribution everywhere in Britain, large quantities of its seed are imported from Holland, hence it is sometimes called Dutch clover. Curtis, in his "Flora Londinensis," mentions that one firm alone, Messrs. Gordon and Dermer, "who do not particularly deal in this article, sell every year forty or fifty tons." This was written in the year 1777. Its vigorous growth is rather happily indicated in its French name—*trèfle rampant.*



STINGING NETTLE.

THE STINGING NETTLE.

Urtica dioica.
Nat. Ord., Urticaceæ.

AN old writer, Culpeper, who dealt with plants chiefly from the point of view of their real or fancied utility, declared when he came to the consideration of the stinging nettle that any description of so well-known a plant was entirely needless, and added that even on the darkest night it could be found by feeling for it. This statement is, perhaps, a little flippant, but it certainly contains a good deal of truth.

The nettle is a perennial, and abundant almost everywhere. Its quadrangular stems are some three or even four feet in height, and the leaves grow in pairs. These leaves are heart-shaped and varying somewhat in their more or less proportion of length to breadth. Like the stems, they are covered with numerous small tubular prickles: these, when touched, exude an acrid fluid, and produce a considerable amount of irritation. The foliage, as our illustration shows, is very deeply toothed. The flowers are minute and in abundance on the branching clusters that freely spring from the axils of the leaves. The male and female flowers are ordinarily found on different plants, as the name *dioica* suggests. Individually they are inconspicuous, and their dull greenish colour renders them possibly not very attractive, yet we will venture to say that anyone who has hitherto rather scorned this plant as the veriest of weeds, entirely unworthy of attention, will find that it has more claim, even on the score of attractive appearance, than he has hitherto been prepared to allow. Our present species is the commonest of the three that are to be found on our waste lands, and as they all possess the stinging characteristic, the plant we figure is sometimes called the great stinging nettle, the other two being known as the small nettle, *U. urens*, and the Roman nettle, *U. pilulifera*. This latter is even more irritant than the common species that we are now specially dealing with, though, fortunately, we have nothing in England so venomous as an allied species, *U. crenulata*, common enough in India. This, though touched ever so slightly, will set up an inflammation causing intense pain for days after. The generic name of all these nettles, *Urtica*, is as old as Pliny, and is derived from the Latin *uro*, I burn, in obvious allusion to this inflammatory property, while the common name is a corruption of needle, and equally obviously refers to the needle-like stings that are so sharply aggressive. These stings are so acutely pointed that at the least contact they pierce the skin, and the poison from the small receptacle at their base enters the minute wound, but if they are handled with some little vigour they are broken, and one escapes scot-free. "Tender-fingered grasp a nettle, and it stings you for your pains; grasp it like a man of mettle, and it soft as silk remains."

The nettle, especially in the northern and midland counties, is often boiled as a table vegetable, the action of heat destroying its poisonous nature. As we have, wherever practicable, tested the various statements that, from Pliny downwards, have been made about our British plants, the edible nature of the stinging nettle came in its turn for experiment. Stinging nettles grew abundantly around us, but we can only say that after the first experiment we did not find ourselves hankering after them. Bryant, who wrote a book called the "Flora Dietetica," dealing, as the title suggests, with the food value of plants, says, we notice, that the leaves of the stinging nettle are "not unpleasant to the taste." This, however, is not a very high measure of commendation. He adds that they are an excellent antiscorbutic, and powerfully efficacious in all cutaneous trouble, and "nettle tea" is still a very popular spring medicine in some parts of the country. In Scotland it is the custom to stir some oatmeal in with it. Externally used, a bunch of stinging nettles was held by our forefathers an excellent thing to "let out melancholy," and to promote the warmth of the body; it was also sometimes used as a remedy, or at least a reputed remedy, in chronic rheumatism, cramp, and loss of muscular power. As our zeal for practical experiment stopped at a point short of this flagellation, we cannot, from personal knowledge, testify how far this treatment is sound, though it certainly would appear more likely to induce melancholy than to let it out. There can be little doubt, we imagine, but that a vigorous application, of course by another person, would promote the warmth of the body, and, possibly, even warmth of language.

Before the advent of cotton from America, somewhere about a century ago, the stinging nettle was held in great repute by the careful housewife, as its fibre, spun and woven, yielded an excellent material for anything, from stout rope to delicate lace, and it was quite open to our ancestors to dine off nettle tops, served on a nettle table-cloth, and then to retire to rest between nettle sheets. The plant has also been advantageously used in the manufacture of paper.

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